

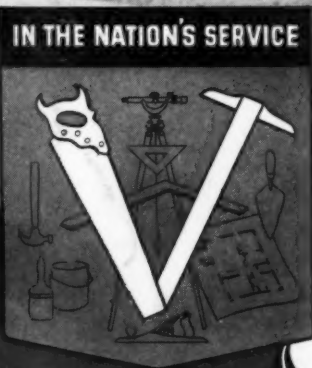
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THE WORLD'S GREATEST BUILDING PAPER

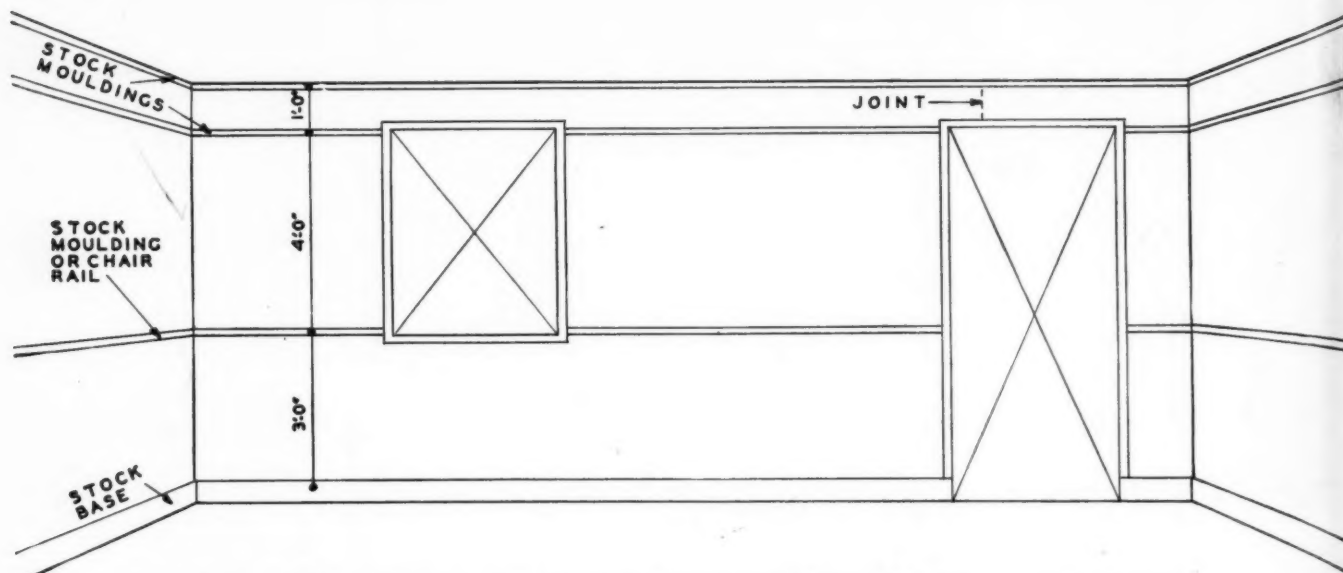
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DETROIT



New War Board Order Rallies Builders To Essential War-Construction Tasks

- 1, War Housing; 2, War Plant Construction;
- 3, Farm Buildings; 4, Repairs and Remodeling

SIMPLE NEW 3-4-1 SYSTEM MAKES BEAUTIFUL WALLS OF ANY STANDARD 4-FOOT CELOTEX BOARD



**Goes Up Fast—Saves Decorating Time and Cost
Permits Variety of Pleasing Effects**

"HURRY! HURRY!" . . . "War worker needs the house!" . . . "How soon can we move in?" These are words familiar to every contractor in defense areas today. Owners and builders are eagerly seeking every means to hasten completion without sacrificing quality.

Here's an idea you can use without sacrificing anything but delay and needless expense: Use Celotex Ivory Finish Building Board or White Rock Gypsum Wall Board or Celotex Hard Board—in standard 4-foot widths—to build beautiful, modern, joint-free interiors! Cut a one-foot strip from the 4-foot board, and use the remaining

three feet—laid horizontally—between base and chair rail. Then place a four-foot width from chair rail to picture mould. Now use the one-foot strip to take you from picture mould to ceiling!

All these Celotex Building Products are available now. And all of them make good-looking walls without further decoration! Owners in a hurry won't need to wait for decorators. Furthermore—owners know the world-wide Celotex quality reputation. They know Celotex Products add to the permanent value of any house. And they'll appreciate the extra speed this Celotex 3-4-1 method makes possible!

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BUILDING PRODUCTS
INSULATING SHEATHING, LATH, INTERIOR FINISHES
ASPHALT SHINGLES, SIDING, ROLL ROOFING
HARD BOARDS, ROCK WOOL BATTS, BLANKETS
GYPSUM PLASTERS and LATH and WALL BOARDS

THE CELOTEX CORPORATION • CHICAGO

Published monthly by Simmons-Boardman Publishing Corporation, 105 W. Adams St., Chicago, Ill. Subscription price, United States, Possessions, and Canada 1 year \$2.00; 2 years, \$3.00; foreign countries: 1 year, \$4.00; 2 years, \$7.00. Single copies, 25 cents. Entered as second-class matter Oct. 11, 1930, at the Post Office at Chicago, Illinois, under the act of March 3, 1879, with additional entry as second-class matter at Mount Morris, Illinois. Address communications to 105 W. Adams St., Chicago, Ill.

EVEN OVER A BEDROOM DRESSING TABLE a woman can always open this window with one hand

because

- (1) It swings instead of slides.
- (2) Its movable parts are steel—
they never warp, swell,
stick or bind.



The Ordinary Window

It's almost impossible to open an ordinary sliding window that's warped or swollen, or stuck with fresh paint, especially over a dressing table.

low-cost houses includes a high-grade steel casement, Bonderized, prime-painted, glazed, wood cased and outside trimmed—all factory-built, complete. Hardware is included. Pre-fit inside wood trim if desired . . . Get facts and figures about this extraordinary window-unit Bargain. Use coupon.

Installed in a Jiffy using
Hammer and Nails only



Installed Outside in
5 Minutes



Trimmed Inside in
8 Minutes

Just see how *easily* the new Fenestra Package Window opens, even over a bedroom dressing table. Compare with opening an ordinary window—photo at right.

Your owners will like windows they can open, even over a living room davenport, a dining room buffet, or a kitchen sink.

And they'll like the greater beauty, more daylight, better ventilation, safe cleaning, permanent weather-tightness, better screens and low-cost storm sash—all at a surprisingly low cost.

The Fenestra Package Window for

THE NEW LOW-COST
Fenestra
PACKAGE WINDOW

DETROIT STEEL PRODUCTS COMPANY,
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Dept. AB-5, Detroit, Mich.

I am a () Contractor () Owner
() Dealer () Architect

Please send me the new Fenestra Package Window catalog and Price List.

Name _____
Address _____
City _____ State _____



CONSERVE CRITICAL MATERIALS

You can be sure that you are doing your part by using a minimum of war materials on the roofs you build with non-critical Red Cedar Shingles. They are available in sufficient quantity to meet all roofing needs. Their manufacture requires none of the chemicals or minerals so urgently needed for the war effort.

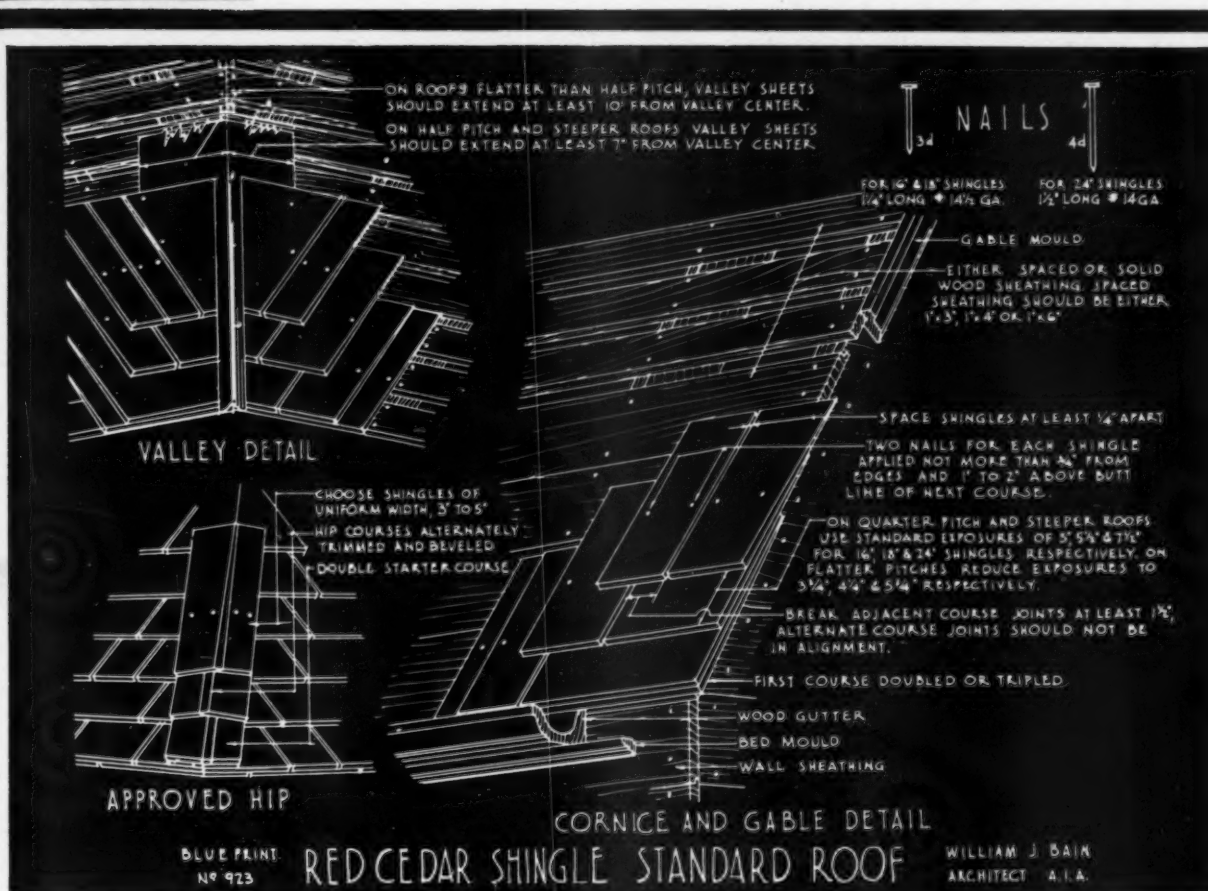
Here's how to build better shingle roofs while conserving war materials! Study the steps for saving time and materials shown here; and send for the complete set of free blueprints.

RED CEDAR SHINGLE BUREAU

5508 White Building, Seattle, Washington, U. S. A.
Canadian Office: 811 Metropolitan Building, Vancouver, B. C.



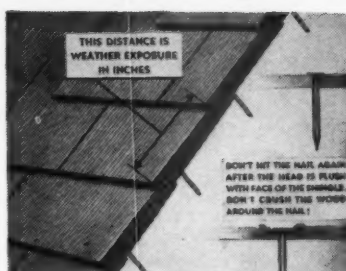
Red Cedar SHINGLES



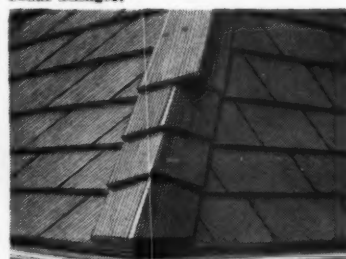
SHINGLE RIDGES ELIMINATE METAL
—Good tight ridges of Red Cedar Shingles are advantageous in avoiding air and rain infiltration. Properly constructed, these ridges require no critical metals. Rainwater drains away from the center lines as fast as it falls.



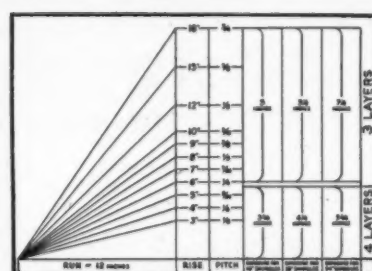
OVER-ROOFING ADDS INSULATION—SAVES FUEL—When re-roofing, don't remove the old shingles. Leave them in place to serve as an added insulative layer. This prevents heat loss in winter—conserves vital fuel.



USE ONLY 2 NAILS TO EACH SHINGLE
—Nails should be driven not more than 3/4" from each edge of the shingle and approximately 2 inches above the butt-line of the course next to be applied. A force of 80 pounds will not lift a properly applied Red Cedar Shingle.



THE BOSTON HIP IS SIMPLE, ECONOMICAL, EASY TO APPLY—Alternately beveled edges insure against air and weather penetration. No metal or exposed nailing is required. Architectural effect is most pleasing. See blueprint above.



PROPER EXPOSURE INSURES LONG LIFE—SPEED OF APPLICATION—This chart will assist you in the selection of proper exposures for various roof pitches. Three complete layers of shingles are provided on roofs of quarter-pitch and steeper; four layers are obtained by using the exposures recommended for pitches less than one-quarter.

FREE BLUEPRINTS

We will gladly send you free a set of blueprints covering all types of red cedar shingle roof and sidewall application.

RED CEDAR SHINGLE BUREAU ARS42
5507 White Building, Seattle, Washington

Gentlemen: Please send, free, a set of Architectural blueprints of Shingle Applications.

NAME.....

ADDRESS.....

CITY..... STATE.....

Quality costs nothing extra when you specify this paint



THIS may surprise you — with all its proved benefits, white lead costs no more than regular quality paints.

That's a good thing to know, especially if you're concerned with defense housing, where you have to keep a tight lid on the budget.

But, even more important than its first cost — white lead is famous for its long life. Expert painters will tell you there's nothing better for meeting the challenge of the seasons, year after year.

Remember, white lead is made from lead; and lead, as you know, is a rough-and-ready metal, unexcelled in defying climate and resisting corrosion.

White lead, too, can stand long exposure — keeping its looks, without cracking and scaling. It provides a tough, elastic armor, good for years of stalwart protection.

So if you want the tops in paint value, specify pure white lead. It's an outstanding example of "the best is cheapest."

LEAD INDUSTRIES ASSOCIATION

420 Lexington Avenue, New York, N. Y.



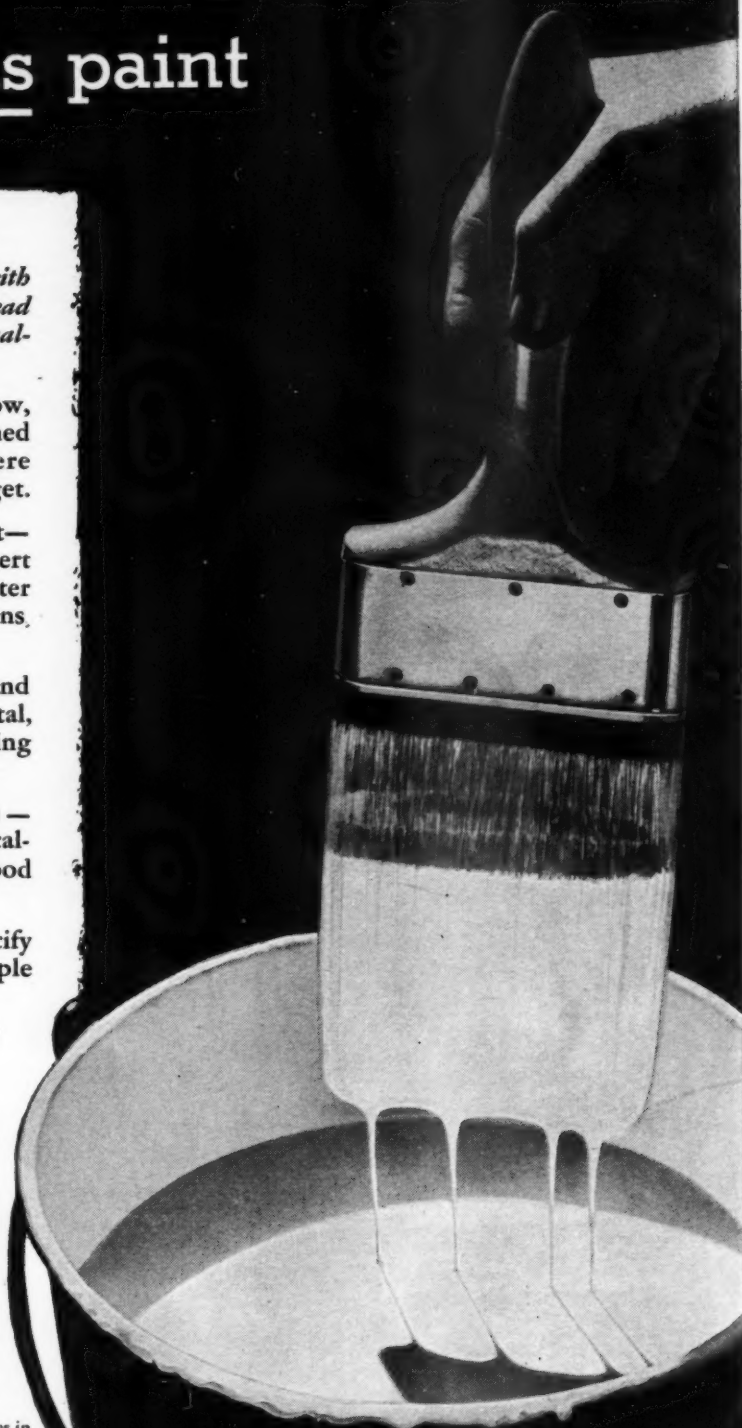
NEW DEFENSE HOUSING GETS RELIABLE WHITE LEAD PAINT PROTECTION
These new two- and four-family housing units at Bridgeport, Conn. are all cloaked in pure white lead paint — tinted to battleship gray — enhancing their looks, as well as giving them matchless protection against the elements.

INFORMATION FOR BUILDERS — Pure white lead is sold by paint stores in two different forms: (1) as a paste, commonly known as "lead in oil," for use in mixing pure white lead paint to order for each job; (2) as pure white lead paint in ready-to-use form, in popular-size containers. Remember you are not confined just to white — white lead can be tinted to a wide range of colors.

White lead is also the backbone of other quality paints. In specifying exterior paint it is a safe rule to follow: "the higher the white lead content, the better the paint."



FREE GUIDE TO BETTER PAINTING — Send today for valuable booklet, "WHAT TO EXPECT FROM WHITE LEAD PAINT," containing complete information about low-cost quality painting on all types of surfaces.



**You're money ahead
when you paint with**

White Lead

Time-Saving Label System Greatest Door "Scoop" of Year!

... NEW
**COLOR-GRADED
DOORS SPEED
HANDLING OF
WAR ORDERS**



LEARN THESE GRADES

A WHEELER OSGOOD DOOR
DE LUXE GRADE A — Bright blue label, bearing the grade, size, style, surface and guarantee! Helps customers recognize quality.

B WHEELER OSGOOD DOOR
MASTER GRADE B — Bright red label, bearing grade, size, style and surface.

IMMEDIATE DELIVERY! Wheeler Osgood "Color-Graded" Grade A and B Douglas Fir house doors, as well as many other designs of doors furnished by this pioneer firm, are built in strict accordance with United States Department of Commerce Standards CS73-38 and CS91-41, and are available for immediate delivery! Specify these better doors today!

... AND EVERY DELUXE GRADE WHEELER OSGOOD DOOR IS *Guaranteed*

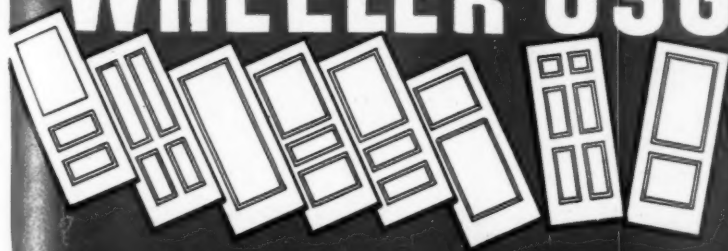
Wheeler Osgood's amazing new "Color-Grading" system for doors, gives you these benefits: (1) A new way to tell the grade, size, style and surface of doors at a glance; (2) a new way to show customers why they should have *quality doors*! Every Wheeler Osgood door now bears a distinctive paper label, securely attached to the bottom rail. On Deluxe Grade A doors, this label features the

famous Wheeler Osgood guarantee! Today, these fine doors offer you more than ever before, thanks to this new system, that thousands call "the greatest idea in the door industry!"

FIR IS FINEST FOR DOORS!

The story of Fir is the story of *quality*! Feature Fir! One of the world's finest woods for door manufacture. Fir is uniform, super-strong, rot-proofed by nature, highly resistant to marring! Mail coupon for facts!

WHEELER OSGOOD DOORS



A COMPLETE LINE OF INTERIOR AND EXTERIOR DOORS

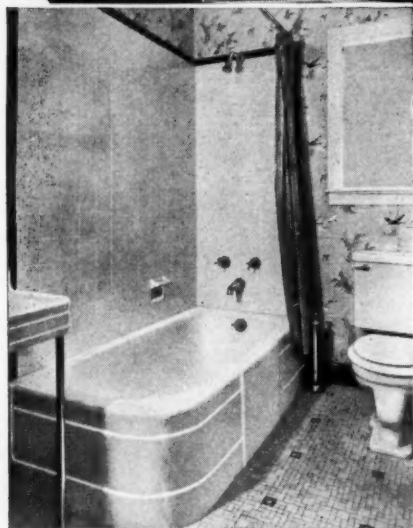
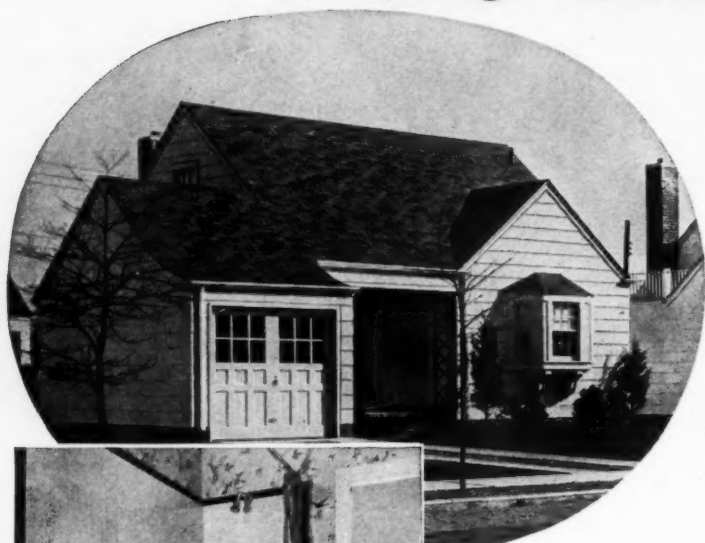
FREE

The Wheeler Osgood Sales Corporation
Dept. 13, Tacoma, Washington.
Gentlemen: Please send me free literature on Wheeler Osgood "Color-Graded" Fir Doors.

Name.....
Address..... State.....
City.....

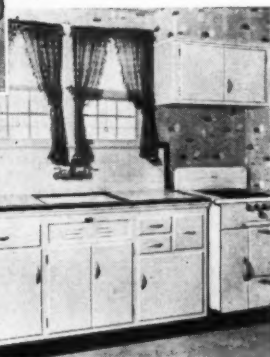
Write "CRANE"

IN YOUR DEFENSE HOUSE SPECIFICATIONS



↑ One of the homes in the Gibson Defense Housing Project at Valley Stream, Long Island, N.Y. These homes are built to sell for \$4,800 complete, including lot and are equipped throughout with Crane plumbing and heating.

↓ This charming kitchen in one of the Gibson homes has a Crane flat rim sink installed in a tile counter top.



↑ Crane bathroom in one of the Gibson homes. The bathtub is the Coronova complete with shower. The lavatory is the Neuday and the closet the Neuton.

Defense housing projects mean low costs—they mean speedy construction—but they should also mean quality, for these homes will play an important part in the post-war life of America. That builders recognize this responsibility is evidenced by the large number of defense workers' homes in which Crane plumbing has been installed.

The Crane line includes a range of fixtures especially designed and manufactured for low-cost homes. You will find that these fixtures are priced to meet the cost requirements of defense housing projects, and that Crane plumbing installed in the houses you build will give longer—better service.



CRANE

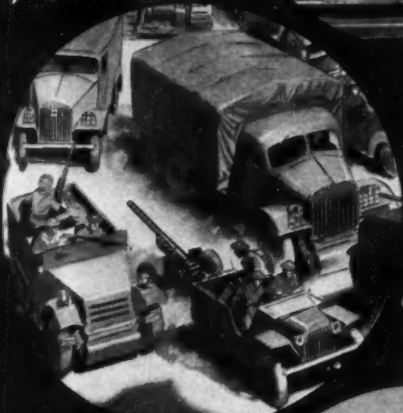
NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

CRANE CO., GENERAL OFFICES:
836 SOUTH MICHIGAN AVENUE, CHICAGO
PLUMBING • HEATING • PUMPS
VALVES • FITTINGS • PIPE

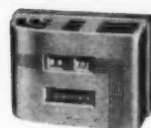
Yesterday



Today



Tomorrow



"FIRST THINGS MUST COME FIRST!"

Today it is "all out" effort for Victory, with all that it implies . . . Yesterday it was normal peace time pursuits, with first for quality . . . service . . . progress . . .

Tomorrow it will be first in newer and better things, for more and more people. In all of these firsts, Minneapolis-Honeywell has served, is serving and will continue to serve. Minneapolis-Honeywell Regulator Co., 2842 Fourth Avenue South, Minneapolis, Minn. Branches in 49 cities.

MINNEAPOLIS-HONEYWELL
Regulator Company

UNCLE SAM NEEDS THIS

Take a look at remodeled VICTORY HOUSE, Schenectady, N. Y.—the kind of house Uncle Sam wants more of in a hurry for every area that needs war worker housing. Scarcely over a fortnight ago it was a big old dwelling that housed *one* family. Today, after remodeling, *four* families live there—each in their own apartment with ample accommodations and modern conveniences, including electric kitchens!

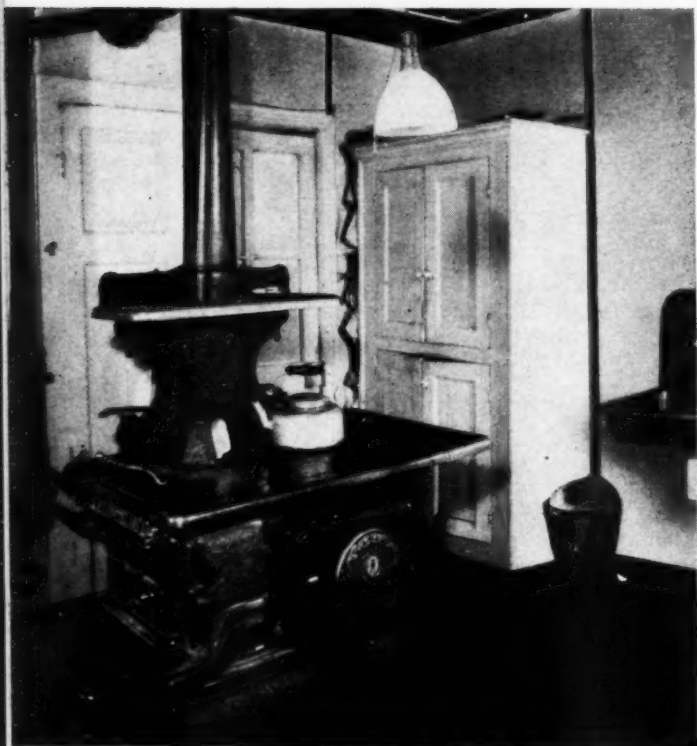
Financed through the FHA Plan, and remodeled by a local builder, Victory House is already making history as an important solution to housing shortages in vital defense areas.

Houses like this can be "made over" *fast*, they *use less* of the vital materials needed for war production, and they mean profitable business for YOU.

Uncle Sam wants architects, builders and contractors in local defense areas to get busy NOW on these remodeling jobs. For details, get in touch with the nearest FHA office in your locality, or, write to FHA, Washington, D. C.

When planning and figuring on remodeling jobs, remember—the war worker tenant needs most the lower operating costs that are possible only with efficient, high grade household equipment.

Actually
IT CAN COST
LESS TO
LIVE BETTER

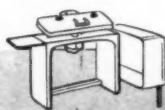


BEFORE Victory House was remodeled, its old-fashioned, "marathon" kitchen looked something like this. It tells its own story of inefficiency, waste space, endless drudgery.



AFTER remodeling, the four new kitchens in Victory House look like this—streamlined, efficient, step-saving, *thrifty*. Units include Refrigerator, Electric Range, Cabinets.

GENERAL ELECTRIC

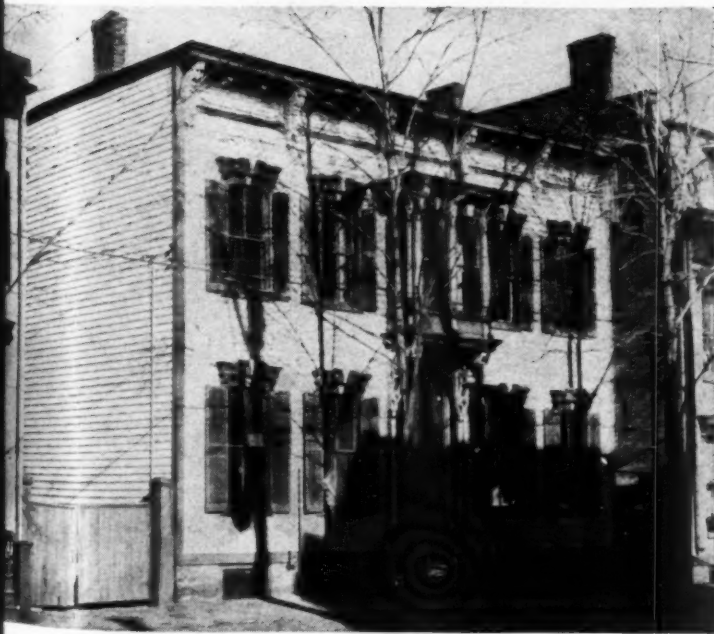


SKIND OF BUSINESS.....

ED



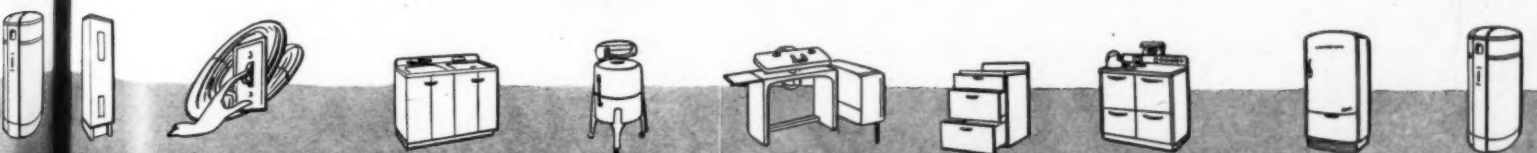
VICTORY HOUSE, 105 Front St., Schenectady, New York, on opening day, January 24, 1942, just after remodeling. The famed M-3 type Tank is the official escort. Men like those who help produce the tanks are tenants of Victory House.



BEFORE remodeling, a down-at-the-heels, 70-year old dwelling that formerly housed but *one* family. A "white elephant" on anybody's hands!



AFTER remodeling, Victory House emerges with modern conveniences for *four* families. Architect, Giles Van der Bogert.





If YOU Had to Design an Insulation... It Would Be DOUBLE-VALUE BALSAM-WOOL!

—And here's what you'd insist on in the way of performance and extra safety factors:

DOUBLE SEALING Naturally, you'd want the highest efficiency house insulation, *fully* protected—and so you'd double-seal it in a tough protective covering—just as we seal Double-Value Balsam-Wool

DOUBLE WIND BARRIERS You'd realize, too, that an efficient insulation must really *stop* wind infiltration, so you'd provide double wind barriers to keep out chilly drafts and protect the original high efficiency.

DOUBLE MOISTURE LINERS You'd want to be absolutely certain that moisture would not impair the performance of your insulation. And to make doubly sure, you'd provide *two* or more effective, lasting moisture barriers.

DOUBLE AIR SPACES You'd want to give the buyer the utmost in value—you'd want the walls to breathe—that's why you'd provide for *double* air spaces in application.

DOUBLE BONDING You'd take an extra step to make sure that the insulation mat would not settle or pack down within the liners—you'd double bond the mat to the liners.

DOUBLE FASTENING Realizing that insulation is only as good as its application, you'd provide double fastening to eliminate further settling. And, of course, you'd make your insulation fire, vermin and termite resistant.

And when you had all of these qualities built into your insulation, you'd have Double-Value Balsam-Wool—or a reasonably accurate facsimile. It would be the insulation you'd choose for your home. You can learn why Balsam-Wool is designed the way it is by using the coupon below.

WOOD CONVERSION COMPANY
Dept. 119-5 First National Bank Building, St. Paul, Minn.

Gentlemen: I want to know more about the new Double-Thick and Standard Balsam-Wool. Please send me complete information.

Name

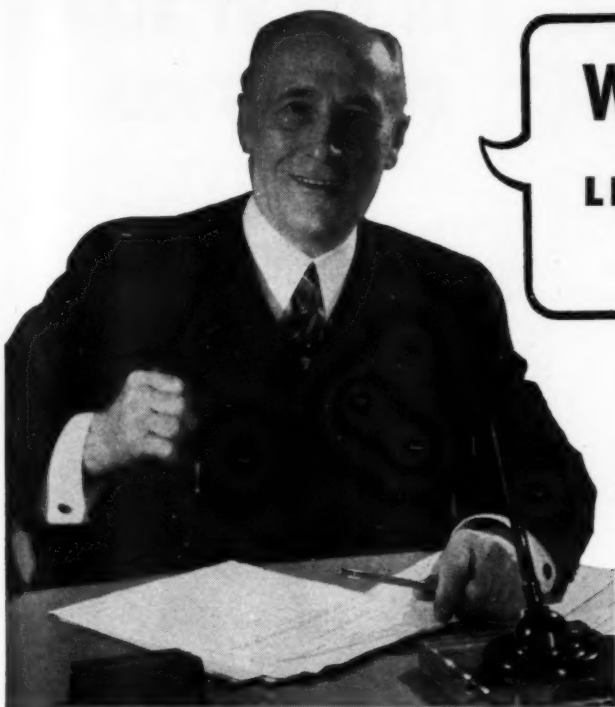
Address

City State

Suppose you had the job of designing the very best insulation that money could buy. Suppose you spent 20 years in determining exactly what insulation must do, how it would act in extreme heat and cold, when exposed to moisture and wind, under every kind of condition, everywhere. You'd probably wind up with a product identical to Double-Value Balsam-Wool.



Product
of
Weyerhaeuser



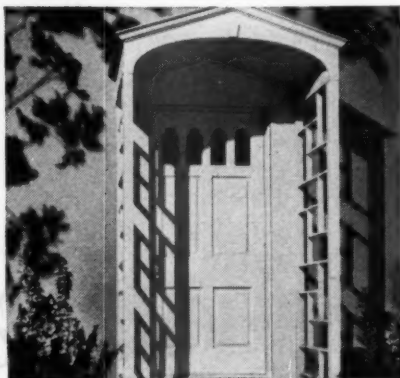
WHAT—NEW WOODWORK LIKE THIS FOR LOW-COST BUILDING?

YES—IT'S "IN TUNE WITH THE TIMES"!

Curtis again makes woodworking news with new woodwork styles, carefully and accurately detailed . . . beautiful enough for the finest home . . . *at prices low enough for the most modest budget.* Here is your answer to the question of putting more sales appeal—more attractiveness—more style—into low-cost housing! And remember, the low price includes Curtis quality craftsmanship in stock designs. Here are just a few of the many styles available in the new low-cost Curtis woodwork line:



Mantel C-6059, designed by Willis Irvin, Architect. Note the careful detailing, the distinguished simplicity. This is low-cost woodwork, thanks to Curtis' standardization.



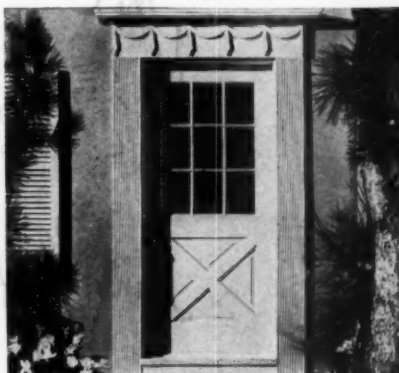
Entrance C-1768, Cameron Clark, Architect. Practical and beautiful, this new Curtis entrance shows that good design need not be expensive.



China Case C-6525, H. Roy Kelley, Architect. No dining room or nook need lack appeal when such woodwork is available for low-cost homes!



China Case C-6529, designed by H. Roy Kelley, Architect. This case may also be used in a straight wall by specifying rectangular back.



Entrance C-1765, Cameron Clark, Architect. Design of famous architects—plus Curtis production—makes such entrances available.



Mantel C-6076, Willis Irvin, Architect. Once, such a distinguished mantel was available only for higher price homes. Now, any home can have it!

1866 CURTIS WOODWORK

CURTIS WOODWORK IS SOLD BY
RELIABLE DEALERS EVERYWHERE

Get all the facts about this new low-cost Curtis Woodwork — see for yourself why it fits the lowest cost home or any home, either new or modernized.
Mail coupon for literature.

CURTIS COMPANIES SERVICE BUREAU
Dept. AB-5W, Clinton, Iowa

I want to know more about the new, low-cost Curtis Woodwork designs. Please mail me complete information.

Name.....

Address.....

City.....State.....

**YOU SHOULD
HAVE THIS
TIMELY BOOK
NOW!**

★ **A 180 PAGE WAR-TIME
BUILDING SERVICE**

WHEREVER YOU BUILD

Wherever you may be building, or want to build—whether it is in the East, West, North or South, no matter if it is in the city, suburb or on the farm—DEFENSE HOMES HANDBOOK will prove a world of value to you. You see, this volume was not prepared for building men in any one section of the country. *It was prepared for defense building everywhere!* Consequently, the material in it was chosen for its adaptability to the particular needs of building men wherever they might be operating.

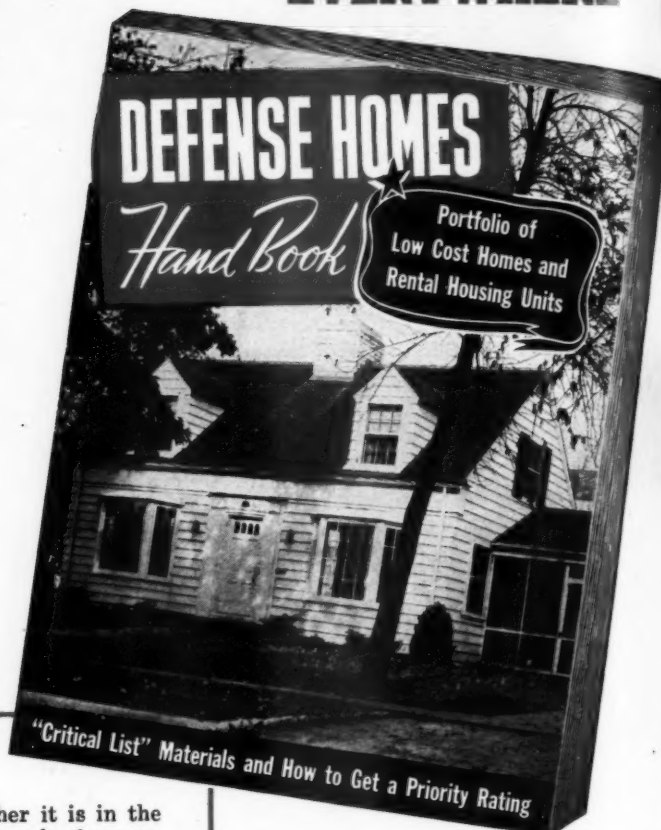
HOWEVER YOU BUILD

Needless to say, with the top price for homes set at \$6,000, the factor of cost is fundamental. It is determined by *how* you build. And that means the methods you use . . . the kind and quantity of materials and labor you employ.

In compiling DEFENSE HOMES HANDBOOK our editors have not for a moment lost sight of the cost factor. In fact, before any of the designs were considered, they had to meet the first and foremost requirement of low cost.

As a result, you will find the design ideas in DEFENSE HOMES HANDBOOK such as can be economically and quickly executed, with a minimum requirement of critical materials and labor time.

★ **IN USE BY ALERT
BUILDING MEN
EVERYWHERE**



SIZE 8½ x 11¼

WHATEVER YOU BUILD

Before you build that next group of low cost homes . . . before you get going on that next job of conversion or repair, be sure you see how the other fellow did it in DEFENSE HOMES HANDBOOK.

See why the workers in Houston, Texas clamored to buy the "Well-Built, Easily Maintained Homes" described on page 104, for example. Or turn to page 124, where you will find the details of a highly successful "\$36-a-Month Bridgeport Development." Thumb back to page 61, perhaps, and see the job of rehabilitation which was done to forty run-down houses in Alabama.

It will pay you to go all through the 180 pages of DEFENSE HOMES HANDBOOK. You will be elated over the number of low-cost home designs you can use. You will find designs which will fit almost every conceivable situation . . . designs to meet nearly every price within the \$6,000 bracket design conceptions you may not have thought of . . . original . . . attractive . . . practical.

A AMERICAN BUILDER

This Is All You Need Do To Receive "Defense Homes Handbook" Free

Fill in the coupon at the right . . . attach your remittance of \$2 for a one year subscription to AMERICAN BUILDER or \$3 for two years . . . and mail.

As soon as your subscription payment is received, a postpaid copy of "DEFENSE HOMES HANDBOOK" will be mailed to you, at no extra cost.

AT NO EXTRA COST

DEFENSE HOMES HANDBOOK

"THE WAY TO BUILD MORE HOMES ECONOMICALLY AND QUICKLY"



See for yourself, from the partial contents below, the numerous, practical ways "Defense Homes Handbook" can serve you.

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Modern Basementless House at Gibson, L. I.—Details of popular model for which first preference rating was given. Photographs shown of completed home, and foundation with layer of concrete laid on earth. Detailed drawing of construction is also shown.

Western Style Home Brought Up to Date—This home is featured by a West Hartford builder. Broad roof lines, and homey porch are especially worth noting. This article is accompanied by three photos, two exteriors and one interior and floor plans of first and second floor, front and right side elevation.

Idea House Showing Latest in Modern Planning Practice, Materials and Equipment in Minneapolis Home Project—Details of exterior, roofing, roof deck, entrance, living-dining room, dressing room, bedroom-study, kitchen and pantry, utility room, bath. Four pages of photos.

Modernization and Multiple Unit Housing Section—Includes: Bungalow Court Type 9-Unit Apartment . . . 16 Unit Apartment on Old Residential Site . . . How a Baltimore Builder Erects Row Houses . . . Salvaged for Defense . . . Once Row Houses Now Apartments . . . Garage Modernized into Rent-Paying Modern Dwelling . . . Cottage Apartments to Rent.

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How New Haven Met Shortage...120
Photos and Plans of Some 72 Homes at New Haven.

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INCLUDE WITH MY SUBSCRIPTION, AT NO EXTRA COST, A POSTPAID COPY OF DEFENSE HOMES HANDBOOK.

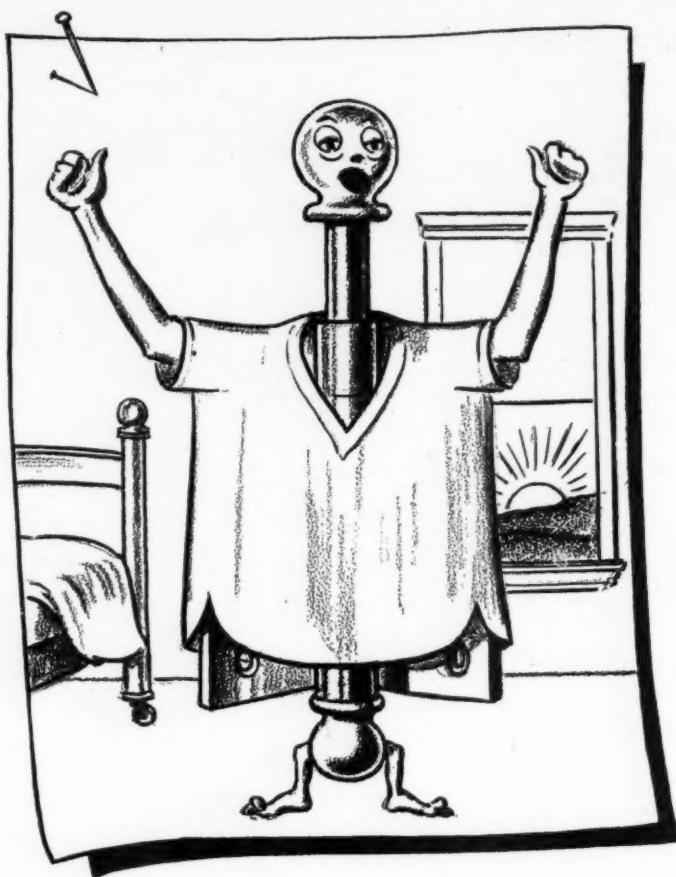
Name

Street..... City.....

State..... Occupation.....

This offer is good only in United States, Possessions and Canada

5-42



HOW IT WORKS

The pin is grooved to hold a small, split expansion ring. When the pin is pushed down, this ring snaps automatically into a recess in the top knuckle of the butt. The expansion pressure is sufficient to prevent the pin from "riding up" from the action of the door, but it does not prevent easy removal when desired.

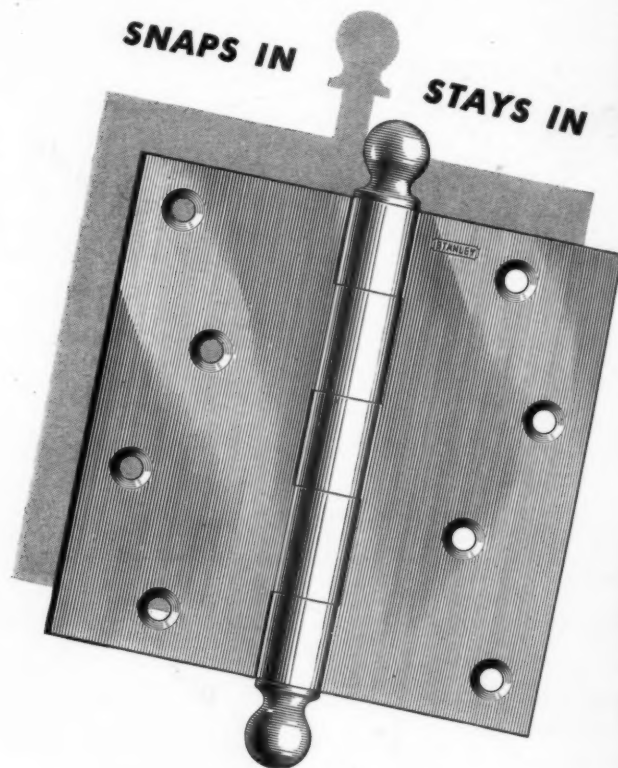


Ask your dealer for Stanley Butts with the new-type non-rising pin next time you order. The Stanley Works, New Britain, Connecticut.

How to End this "Early Rising" Nuisance

Up again and heading for trouble... for you... that's the old style pin in door butts! This kind of "early rising" will never make you healthy and wealthy. But if you're *wise*, you can put an end to this "early rising" nuisance by using Stanley Butts with the new-type non-rising pin.

A simple, but effective improvement in design holds the pin down, once you push it down. It can be seated easily, with a touch of the finger... no twisting or turning, no ears to line up.



The greatest advance in butt construction in 40 years

STANLEY

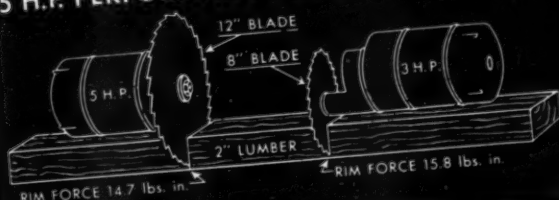
TRADE MARK

HARDWARE FOR CAREFREE DOORS

HOW SMALLER BLADES REDUCE CUTTING COST



5 H.P. PERFORMANCE WITH 3 H.P. MOTOR



The above drawing shows how the W-T Geared Motor (right) gets the shaft so close to the work that a 12" saw cuts as deeply as a 16" saw mounted on the center shaft of the conventional type motor. The small blade generates more rim force at the cutting teeth than the larger saw, enabling a 3 h.p. geared motor to equal the performance of the 5 h.p. conventional motor.

The drawing to the left shows how the patented Geared Motor enables the WALKER-TURNER RADIAL SAW to make deep cuts with much smaller blades than where conventional type motors are used. Small blades have three great advantages over larger ones:

- (1) The smaller the saw, the greater the rim force at the cutting teeth.
- (2) Smaller diameters permit thinner blades which cut faster than thicker ones, use less power, permit cooler running, and waste less material in the cut.
- (3) Small saws, dado heads and abrasive wheels require much less steel or grit and bond than larger ones.

And the WALKER-TURNER RADIAL SAW still costs only \$354.50 f.o.b. Plainfield! Prompt delivery on priority orders.



W-T PATENTED GEARED MOTOR

Special mechanical cushion (self-resetting) protects the motor gears against breakage during momentary overloads. This is an exclusive Walker-Turner feature.

WALKER-TURNER CO., INC.

1052 Berckman Street

Plainfield, N. J.

COMPARATIVE CUTTING CAPACITIES			
W-T Geared Motor		Conventional Motor	
Blade Diam.	Depth Cut	Blade Diam.	Depth Cut
8"	2 3/4"	8"	0"
10"	3 3/4"	10"	1"
12"	4 3/4"	12"	2"
14"	5 3/4"	14"	3"
16"	6 3/4"	16"	4"



WALKER-TURNER RADIAL SAW

5 MACHINES IN 1

**CROSSCUTS AND RIPS • DADOS
SHAPES • ROUTS • TENONS**

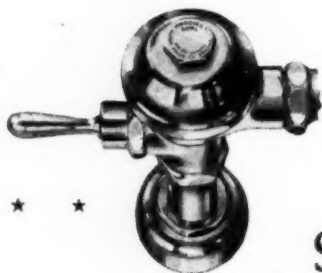
*Start Planning
NOW*



FOR SLOAN-EQUIPPED HOMES ★ ★ ★

After the war there will be a Sloan Flush Valve available to even the modest homes. And they will be improved over the endlessly durable Sloan Flush Valves found today in luxury homes, apartments, clubs, hotels, hospitals, schools, and all types of large buildings everywhere.

For 36 years Sloan Valves have been the acknowledged premier of all flush valves. They have always been astonishingly low in maintenance cost. They have protected health by preventing back-syphonage. They have saved water; reduced the cost of the power necessary to pump water. And now we say: *after the war there will be Sloan Flush Valves, with all their inherent advantages, for residences.*



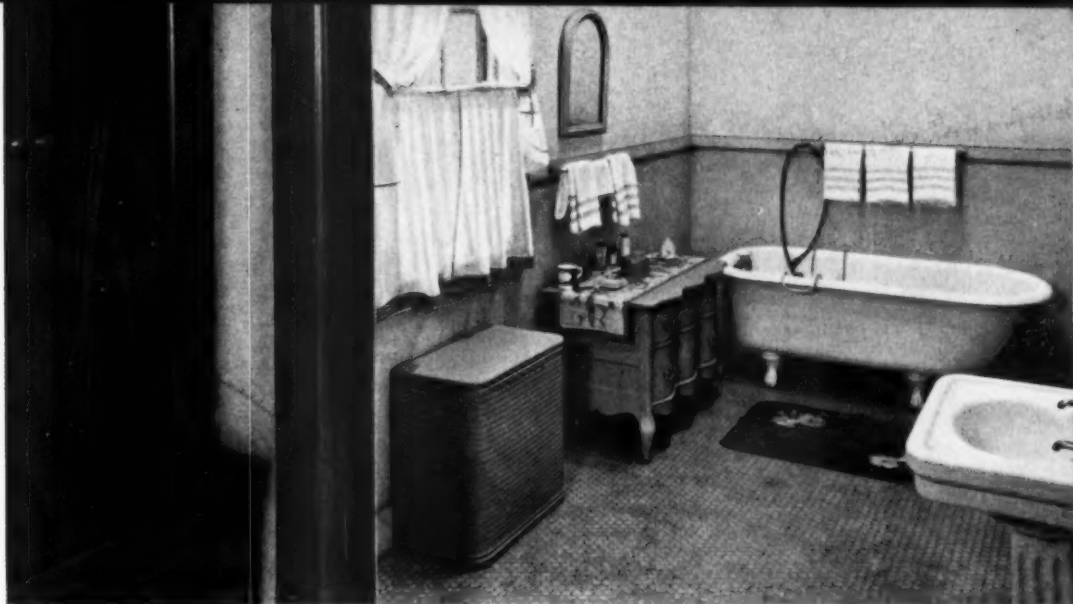
Sloan equipped homes are the ultimate in convenience, health and economy. Remember: there are more Sloan Flush Valves sold than all other makes combined.

SLOAN VALVE COMPANY

4300 WEST LAKE STREET • CHICAGO

ne solution all six wall problems!

What a difference! When you compare the various types of wall material feature by feature. For Nairn wall linoleum one satisfies all the six "musts" of the modern wall.



EYE APPEAL—Wide range of handsome colors from soft pastels to rich, dark tones. Insets and feature strips make decorating possibilities almost limitless!

COLOR CORRELATION—Nairn walls are correlated both with Nairn floors and all the modern furnishings. Now it's easy to plan harmonious interiors!

EASE OF CLEANING—Waterproof, stainproof Nairn wall linoleum is simplicity itself to clean. A damp cloth keeps original beauty intact.

SMOOTH FLEXIBILITY—Nairn wall linoleum can be rounded at corners, doors and windows. Forms a continuous smooth surface without cracks or wrinkles!

LONGER WEAR—Refinishing is never needed. Because colors are inlaid right through to the back, walls of Nairn linoleum last as long as the house itself.

EASE OF APPLICATION—Can be installed over both old and new walls without costly preparatory work. Walls of new houses may be covered as soon as plaster is dry—providing permanent, crack-free surfaces! Fully guaranteed when installed according to specifications.

NGOLEUM-NAIRN INC., KEARNY, NEW JERSEY

BEFORE...

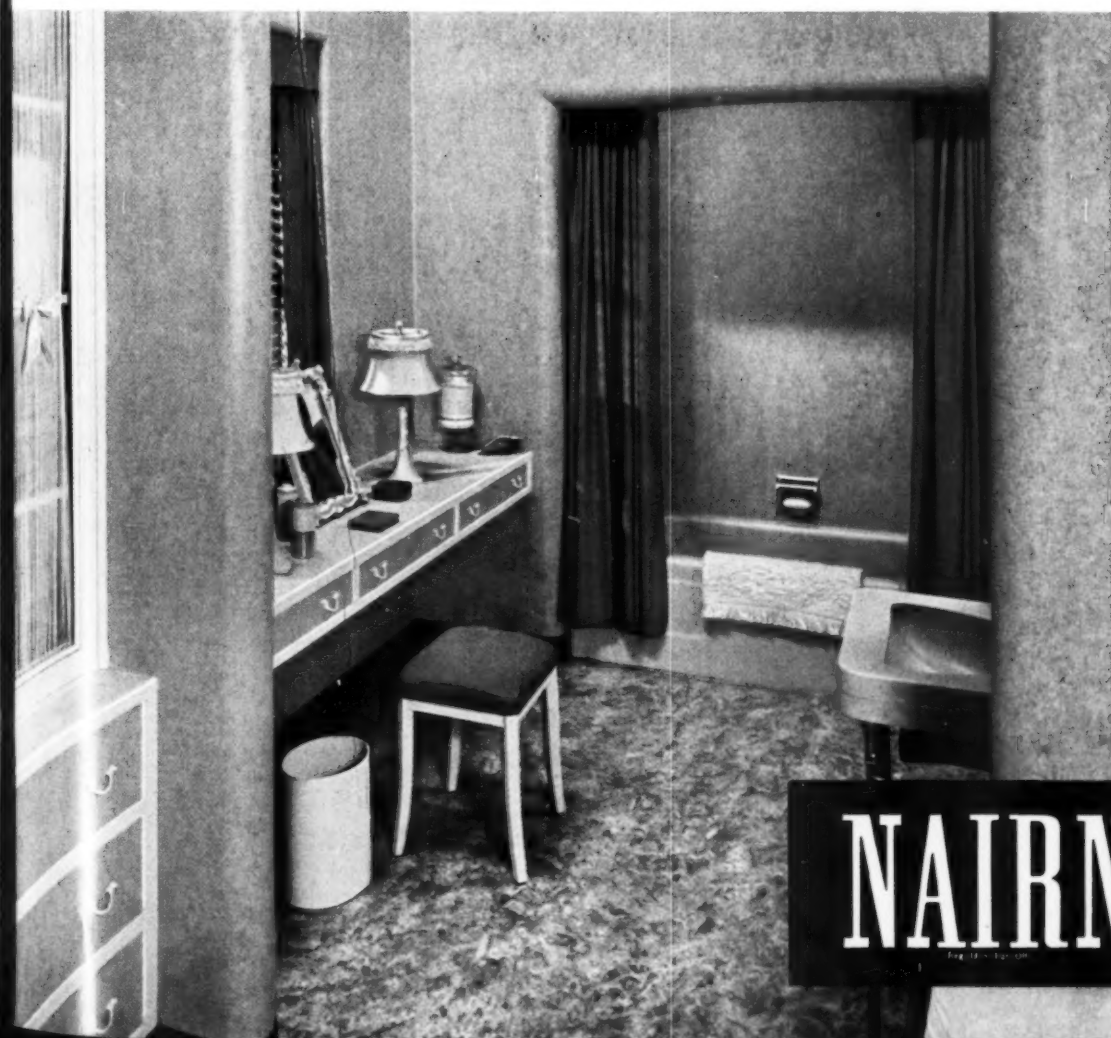
A "Cinderella" Bathroom

—typical of many similar opportunities for modernization with Nairn wall linoleum. Note the dreary lack of color that cries for some warm, cheery tones—the easily smudged walls that housewives find a constant bother to keep clean. More than that, dirt-catching corners make this room positively unsanitary. To completely modernize seems a real problem—but see below what Nairn wall linoleum can do.

AFTER...

A complete transformation

—with a minimum of structural changes. Lustrous "Rose Agate" wall pattern gives the room the needed sparkling effect—and blends perfectly in true Color Correlation with the Nairn Tread-lite floor. See how smoothly the linoleum carries around the curved wall section. There'll never be a crack or wrinkle to spoil its beauty—and a damp cloth keeps it permanently clean. (Below) Close-up of Rose Agate shows the characteristic soft veining.



NAIRN WALL
—
LINOLEUM

NOW...A BATHTUB RECESS WAINSCOT OF CARRARA GLASS *for less than \$30!*

EASY TO INSTALL



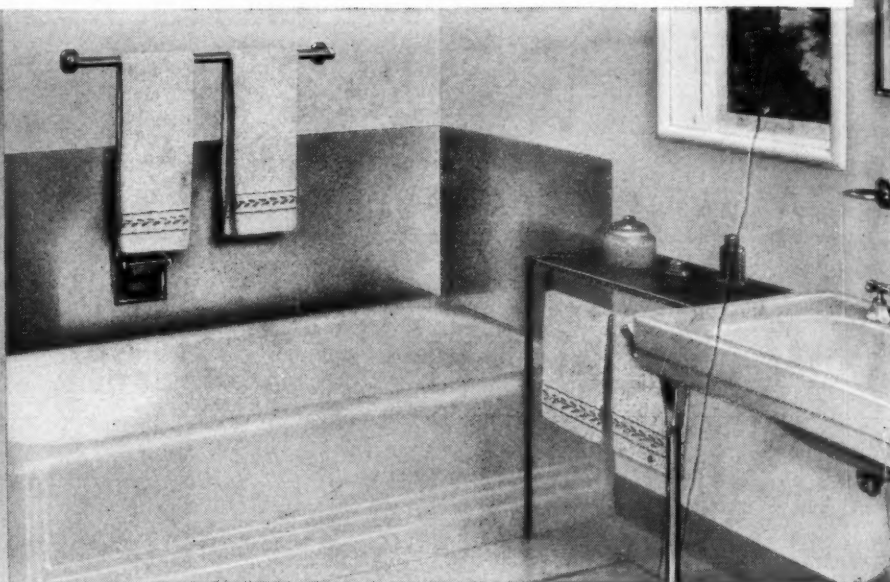
1. AFTER BUTTERING tub rim and studs with mastic, set the back plate of Carrara first. Nail through plaster-board flange and use clips supplied.



2. APPLY END PANELS similarly, allowing plasterboard to extend beyond tub to next stud. If using 48" wainscot, set second course in same sequence.



3. CLEAN THE GLASS, and then fill the joints carefully with the pointing compound supplied, in order to assure thorough waterproofing.



New, Ready-Built Carrara panels designed for use in new low-cost "Defense" homes

HERE'S Carrara Structural Glass . . . long famous as "tops" in quality bathroom materials . . . available at a cost so low it seems almost incredible! And yet this low cost is still further reduced through the saving of labor on the job. For these new Ready-Built Carrara panels are prefabricated at the factory. Glass mounted on plasterboard. All necessary holes for plumbing pipes drilled. And when they arrive on the job, all you do is nail them to the studding! No backing. No pointing. No plaster.

A 24-inch wainscot of Ready-Built Carrara adds style, beauty, and practical usefulness to the bath. And it usually costs less than \$30, with soap

and grab, and all holes drilled ready for installation. Where there's a shower, a 48-inch Carrara wainscot is recommended . . . and this, too, is so low in price it will astonish you. Quick and easy to install, bringing the quality bathroom to the low-cost home. Ready-Built Carrara panels are headline news today.

Ready-Built Carrara also comes in 36"x48" units for use behind kitchen stoves. Send the coupon . . . now . . . for free literature giving colors available, installation details and other data.

"PITTSBURGH"

stands for Quality Glass and Paint

CARRARA
The modern Structural Glass
PITTSBURGH PLATE GLASS COMPANY

Pittsburgh Plate Glass Company
2081-2 Grant Building, Pittsburgh, Pa.
Please send me, without obligation, your free literature and installation details on Ready-Built Carrara Glass Panels.

Name _____

Address _____

City _____ State _____

HERE'S NEW BUSINESS

for you!

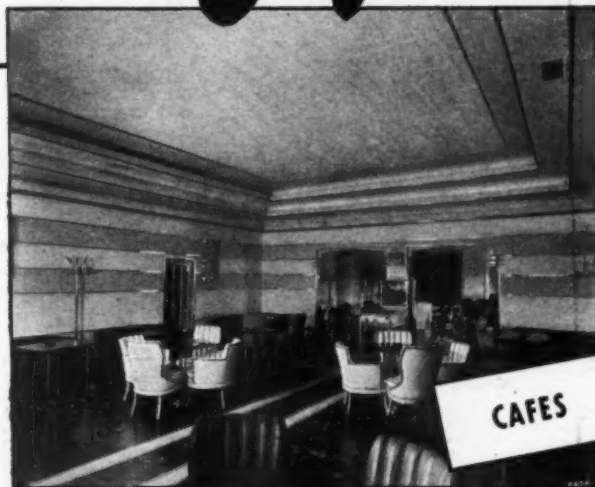
To speed up the war effort and to conserve needed materials, new construction has been drastically curtailed. Your big opportunity in 1942 is in the remodeling of commercial buildings and homes. War production, too, calls for speed in modernizing and enlarging many old buildings.

For such remodeling, Insulite Interior Finish Products fill the bill. Insulite is readily available at lumber dealers everywhere, goes up easily and quickly.

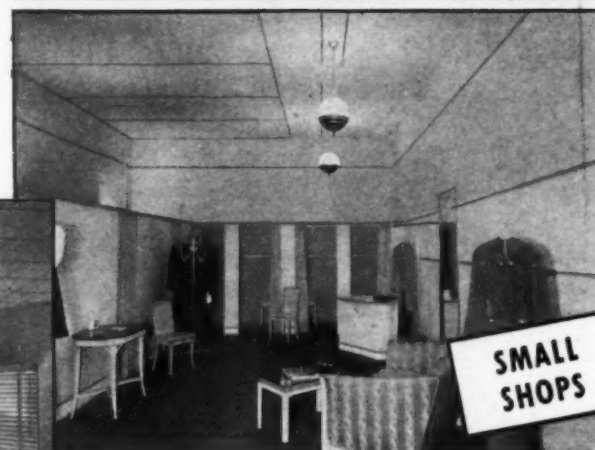
Get on top of the remodeling market in your vicinity by actively selling remodeling jobs with Insulite. Insulite gives you these strong selling points:

EFFECTIVE INSULATION • HIGH LIGHT REFLECTION • SOUND
QUIETING • RAPID, ECONOMICAL APPLICATION • UNLIMITED
VARIETY OF DESIGN AND COLOR COMBINATIONS

If you are unfamiliar with the complete line of Insulite Interior Finish products, ask your Insulite Dealer for samples and complete details, or write Insulite, Department AB52, Minneapolis, Minnesota.



CAFES



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SHOPS



GROCERY
STORES



OFFICES



HOMES

INSULITE

INSULITE
Minneapolis, Minnesota



Division of
Minnesota and Ontario
Paper Company

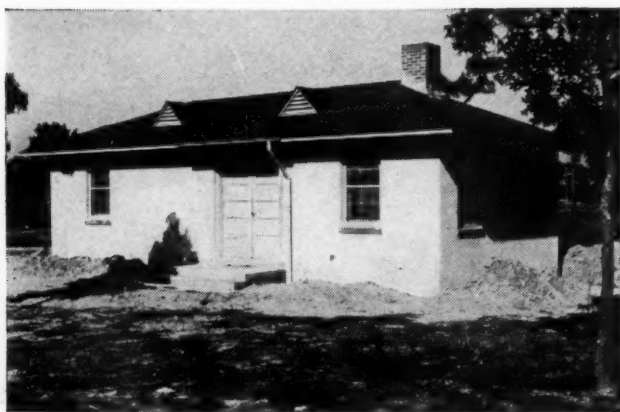
INTERIOR FINISH

DECORATES... INSULATES
QUIETS SOUND



• This Cantonment area under construction is still another example of the U. S. Army's use of stucco made with Atlas White cement applied over hollow tile.

Uncle Sam practices WHAT HE PREACHES



• The trim-looking building above, an Army Radio Transmitter Station, was finished with stucco made with Atlas White cement—resulted in saving of lead, zinc, steel.



• Modern Officers' Quarters at a U. S. Army Base shows the effective use of buff-colored portland cement stucco made with Atlas White cement.

New stucco construction at another U. S. Army Base saves critical building materials . . . steel, lead, zinc.

HERE'S an up-to-the-minute idea for many types of buildings . . . the modern stucco construction on these new Army buildings. It has been used successfully at several Army Bases.

Portland cement stucco made with Atlas White cement was used for both interior and exterior walls—reinforcing mesh was not required. This construction saved critical materials—steel for nails, steel for reinforcing, lead and zinc for paints, etc.

In addition, masonry walls of concrete or cinder block relieves transportation facilities as masonry normally is produced locally; hence, short haul assures delivery, compared to long haul with many other building materials.

Portland cement stucco made with Atlas White cement (plain or waterproofed) is a modern medium for quick, economical building. Use it for buildings at Army and Navy Bases, war workers' homes, stores, hospitals, theaters and other construction necessary for the nation's welfare. You can count on it for durability, weather-resistance, and fire-safeness. And it is low in first cost and low in upkeep. Specify it for new buildings and modernization and save critical materials and transportation facilities.

OFFICES AT: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

ATLAS WHITE CEMENT

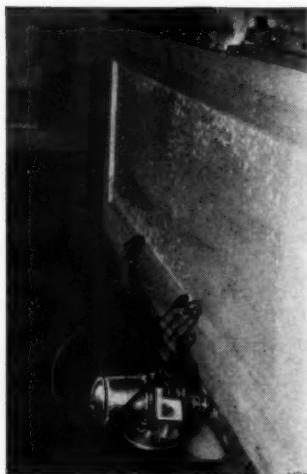
A UNIVERSAL ATLAS PRODUCT



AB-5-29

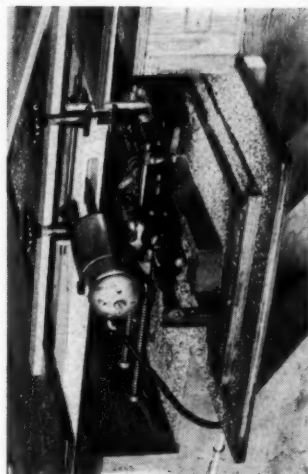
LAYOUT for fitting doors FAST!

Here is one way to cut your costs on fitting doors and attaching hardware. The application of the proper Carter Equipment to this layout will cut weeks on a big job.

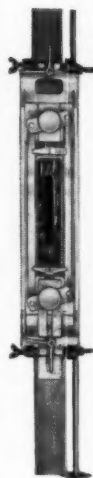


A. Beveling lock side and sizing door to width—Carter R5A Routers with spiral cutters—one on each side of door—the one below bench with cutter tilted to bevel lock side of door.

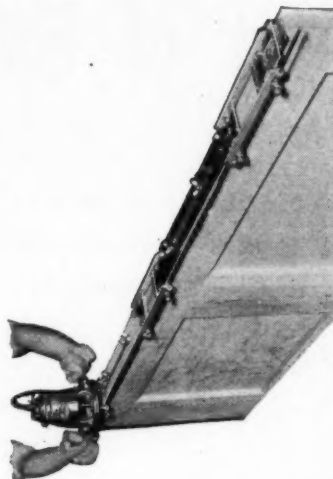
B. Radial Saw—saw top of door—move to stop, saw bottom of door to length.



C. Carter Lock Mortiser mounted in horizontal position.



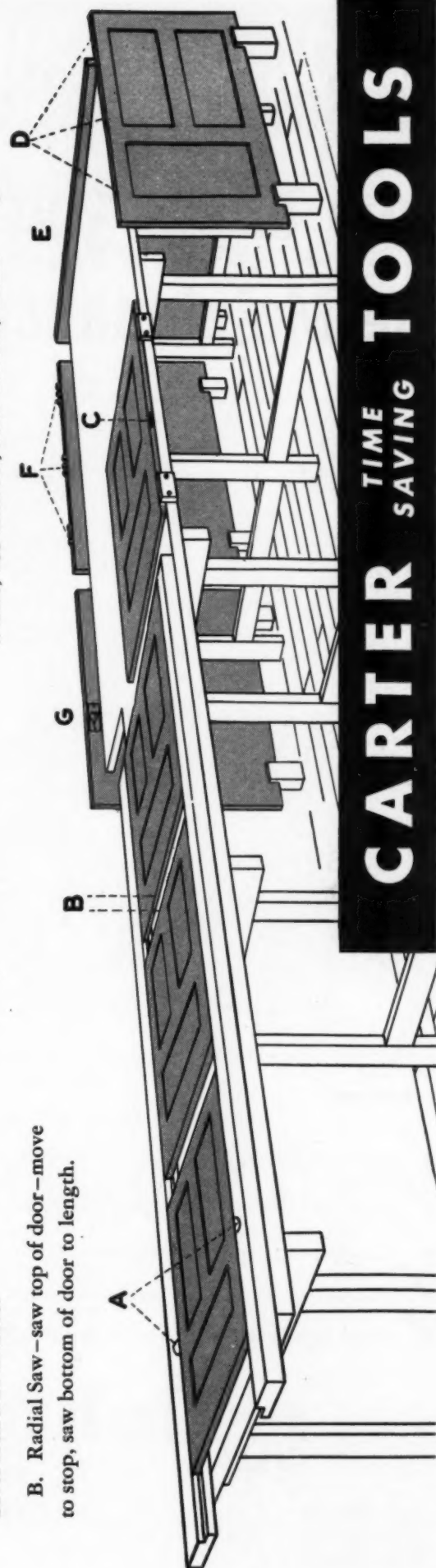
E. Rout out for lock face plate, T1 templet hinged to bench. Use Carter Butt Router.



D. Rout recesses for butts. Door on edge, T3 templet hinged to bench. Use Carter Butt Router.

F-G. Assemble hardware. (F) Butt Halves. (G) Locks—use Stanley Electric Drill and Screw Driver.

R. L. CARTER DIVISION — The Stanley Works, 133 Elm St., New Britain, Conn.



CARTER TIME SAVING **TOOLS**

Re-Roofing with J-M Asbestos Shingles now offers you New Opportunities for the Maintenance and Repair of Homes



J-M American Colonial Shingles are as Easy and Economical to Apply as an Asphalt Strip

- ✓ Five Shingles in One . . . Fabricated as a Strip
- ✓ Only 80 Pieces Per Square . . . Same as Asphalt Strip
- ✓ Self-Spacing Feature Saves Time on the Job
- ✓ Easy to Handle . . . About the Same Weight as Asphalt Strip
- ✓ Need Two Less Nails Than an Asphalt Strip

Fire protection and reduced upkeep costs appeal strongly to home owners

RIGHT NOW, with many sources of business shut off, and with many materials impossible to get, re-roofing with J-M American Colonial Asbestos Shingles offers you an important source of business for your company.

There is no present shortage of J-M Asbestos Shingles, and there is no limit on the number of re-roofing jobs you can sell. Furthermore, necessary re-roofing is entirely in keeping with the spirit of W.P.B. Order L41 of April 9th, which in its far-sightedness considers the maintenance of our homes essential to our war program.

When recommending Johns-Manville American Colonial Asbestos Shingles to your customers, you are doing them a definite favor. For you not only provide them with a roof of outstanding beauty—you give them lasting fireproof, rotproof and weatherproof satisfaction for the lifetime of their houses. And since they are built to last 30 years plus, you can show your prospects that they cost less per year than ordinary roofing materials.

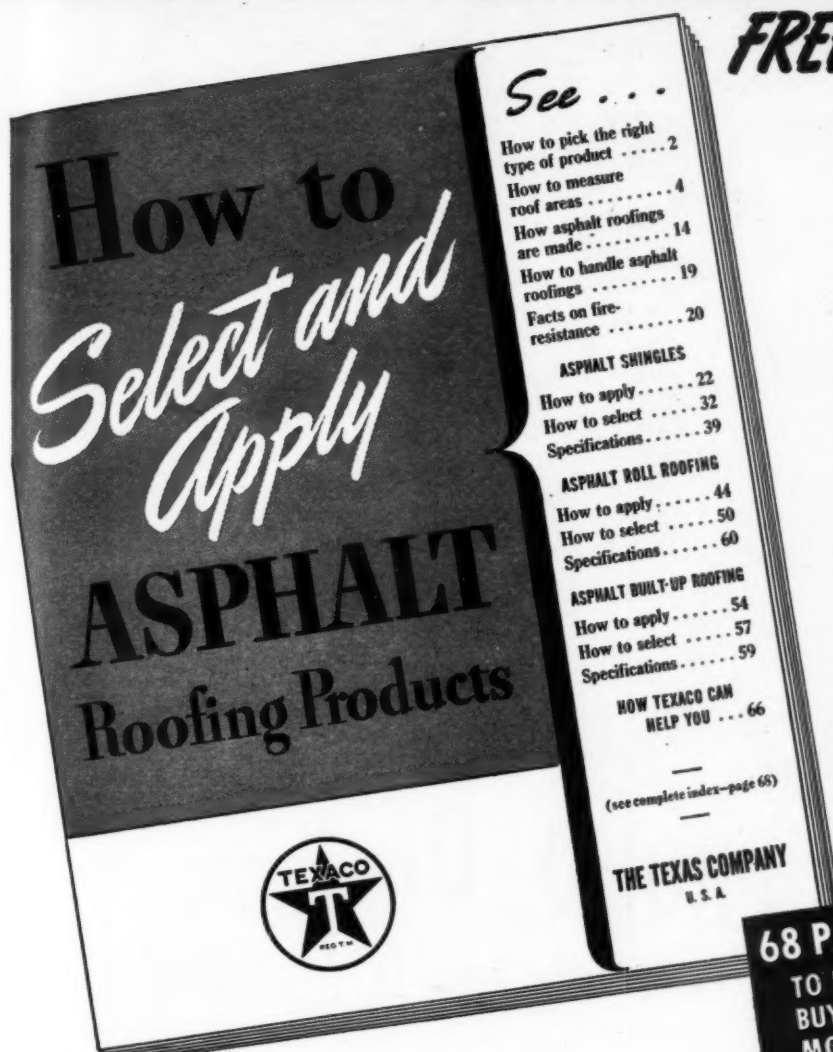
For details on colors and prices see your J-M representative or write Johns-Manville, 22 East 40th Street, New York, N. Y.



Johns-Manville

Asbestos Shingles

Ready now! NEW ROOFING DATA BOOK HELPS YOU BUY... BUILD... SELL!



FREE... Send for your copy today

FOR THE FIRST TIME—ALL THESE FACTS—COMPLETE IN ONE BOOK

Complete, honest information . . . arranged for quick reference . . . on all phases of asphalt roofing. Photographs, diagrams, descriptions, how to select, handle and apply shingles . . . roll roofings . . . built-up roofs.

NO OTHER BOOK LIKE IT

68 pages—with more than 167 illustrations—what-it-looks-like, how-to-do-it. How shingles are made . . . how cut to shape . . . how mineral surfaced . . . the ingredients that go in and what you get . . . how to select the right product for a given slope . . . up to date, simplified methods of measuring roof areas and estimating quantities of roofing materials needed . . . facts about fire resistance . . . weather resistance . . . asphalt.

MAIL COUPON BELOW

Texaco prepared this material originally as a handbook for its own organization. From this, a data book was produced for dealers. Its popularity and practical value suggested the present book. So here it is—edited, enlarged and further illustrated—for you in the building field—to help you.

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Financial Groups
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Made with Texaco's own Asphalts 99½% pure

THE TEXAS COMPANY

135 East 42nd Street, New York, N. Y.

**THE TEXAS COMPANY, Roofing Div., Dept. AB-52
135 E. 42nd St., New York, N. Y.**

Yes, I want my copy of your new, complete 68 page Roofing Data Book. This does not obligate me in any way.

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I am a ☐ Builder ☐ Contractor ☐ Dealer
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your type of business.



"A JOB TO BE PROUD OF!"

Let Good Paint help keep it that way"

...Fortify Defense Homes with weather-fighting White Lead

In Defense Housing, builders face challenging problems. The need is urgent. The price is restricted. Yet liveableness and weather-resistance must be provided.

It's a job you can be proud of doing right. Ingenuity and skill are needed—not only in the construction itself but in the choice of materials. For, in spite of the price limitation and material shortages, these homes must be built to take it.

That means, when it comes to *paint*, you'll want the sturdiest possible protection. For you know from personal experience that the first line of home defense

is good paint. No need to remind you that *good paint's other name is Dutch Boy White Lead*. The years have proved to you that Dutch Boy holds the front like a marine . . . never cracks and scales.

But because cost is such a factor these days we do want to emphasize this:

Dutch Boy is in the Low Price Bracket

Despite its high quality, paint made from Dutch Boy Paste Lead is not high in price—in fact, its cost per gallon is actually *low*. And its weather-defying durability means substantial savings per year of protection.

Another economy point: Dutch Boy is an *all-purpose* product—it can be used for

either two- or three-coat painting, and on any surface—wood, brick, stucco, concrete or plaster.

New Dutch Boy Paint Outstanding for Two-Coat Sealing and Hiding

When it comes to paint that's ready-mixed we invite you to pass professional judgment on the new Dutch Boy Pure White Lead Paint.

It combines the inborn stamina of White Lead with sealing, hiding and whiteness unsurpassed by any two-coat combination on the market. Its two special forms—Exterior Primer and Outside White—are both pure white lead, ready to spread. Together they give results on either new or old wood that will be a credit to you and the nation.



SPECIFY DUTCH BOY PURE WHITE LEAD

NATIONAL LEAD COMPANY
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BILT-WELL

CARR-dor


OVERHEAD GARAGE DOOR

fits the *Defense* or *Remodeling* budget

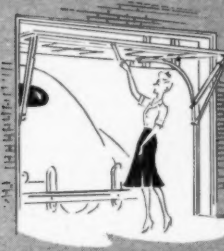


BILT WELL
WOOD WORK

EASY TO OPEN

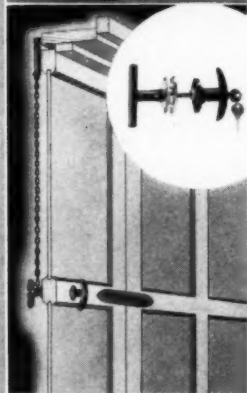


EASY TO CLOSE



The Carr-dor eliminates the tugging and pushing that is necessary with ordinary garage doors. A light touch and the door slides up and overhead—by itself—and stays there. When open, the door is overhead, out of the way and entirely inside.

The Carr-dor, like a dependable car, operates properly at all times, in all kinds of weather. Snow, ice or wind will not affect the easy, smooth operation, or the positive closing of this overhead acting door.



A Bilt-Well Overhead Garage Door is a quality product, regardless of low first cost

The Bilt-Well Carr-dor operates smoothly in the roughest weather. Wind, sleet and snow present no problem to this handsomely designed and correctly built unit. A light touch below the door center and the Carr-dor slides up—out of the way and out of the weather. Closing is equally simple.

Available in 3 architecturally approved designs that are easy to sell and easy to install. Hardware is specially engineered; high carbon steel normalized operating arm and tempered, oil treated individually tested springs with adjustments. Dependable automobile type locking handle is available.

CARR, ADAMS & COLLIER COMPANY

DEPARTMENT 5AB, DUBUQUE, IOWA

Please send me free complete information on Carr-dor Overhead Garage Doors today.

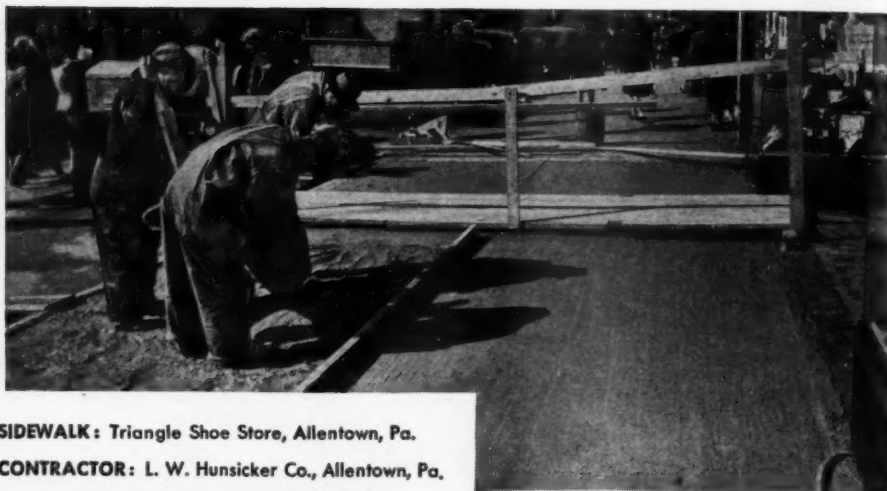
Name.....

Address.....

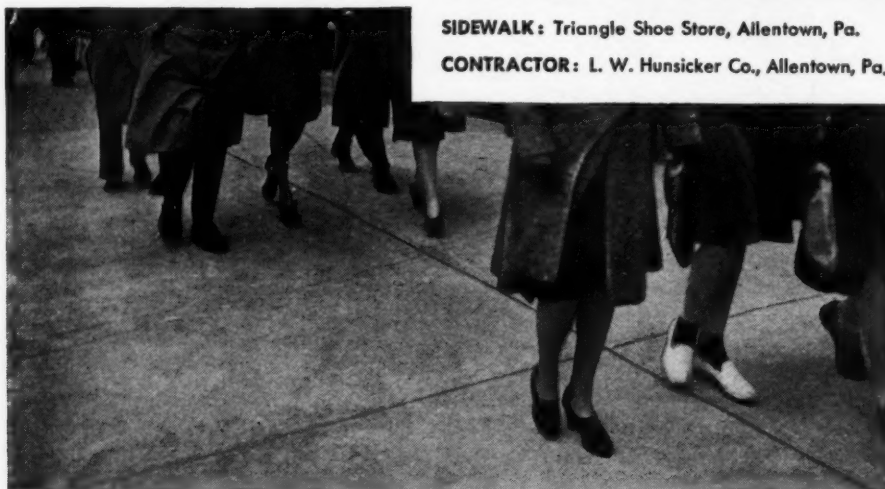
City..... State.....



ONE MORNING
THIS ➔



SIDEWALK: Triangle Shoe Store, Allentown, Pa.
CONTRACTOR: L. W. Hunsicker Co., Allentown, Pa.



LATER THAT DAY
← **THIS!**

Now's no time to waste the other fellow's time!

Within 12 hours after the contractor's men began work on this new sidewalk, it was opened to regular traffic.

By knowing about Lehigh Early Strength Cement, and *using* it, the contractor got service-strength concrete in a hurry—and saved the time of a lot of busy people.

But that's not all!

The up-and-coming contractor will see in Lehigh Early Strength Cement more than a useful paving tool. He'll appreciate that a cement that makes con-

crete ready for service in 1/3 to 1/5 the normal time can play an important part in any concrete job . . . and in the country's emergency.

Here are some of the added advantages to expect: Lower forms cost, because of quicker stripping and re-use; greater job efficiency, because allied trades can be better co-ordinated; lower overhead costs, because of shorter construction time.

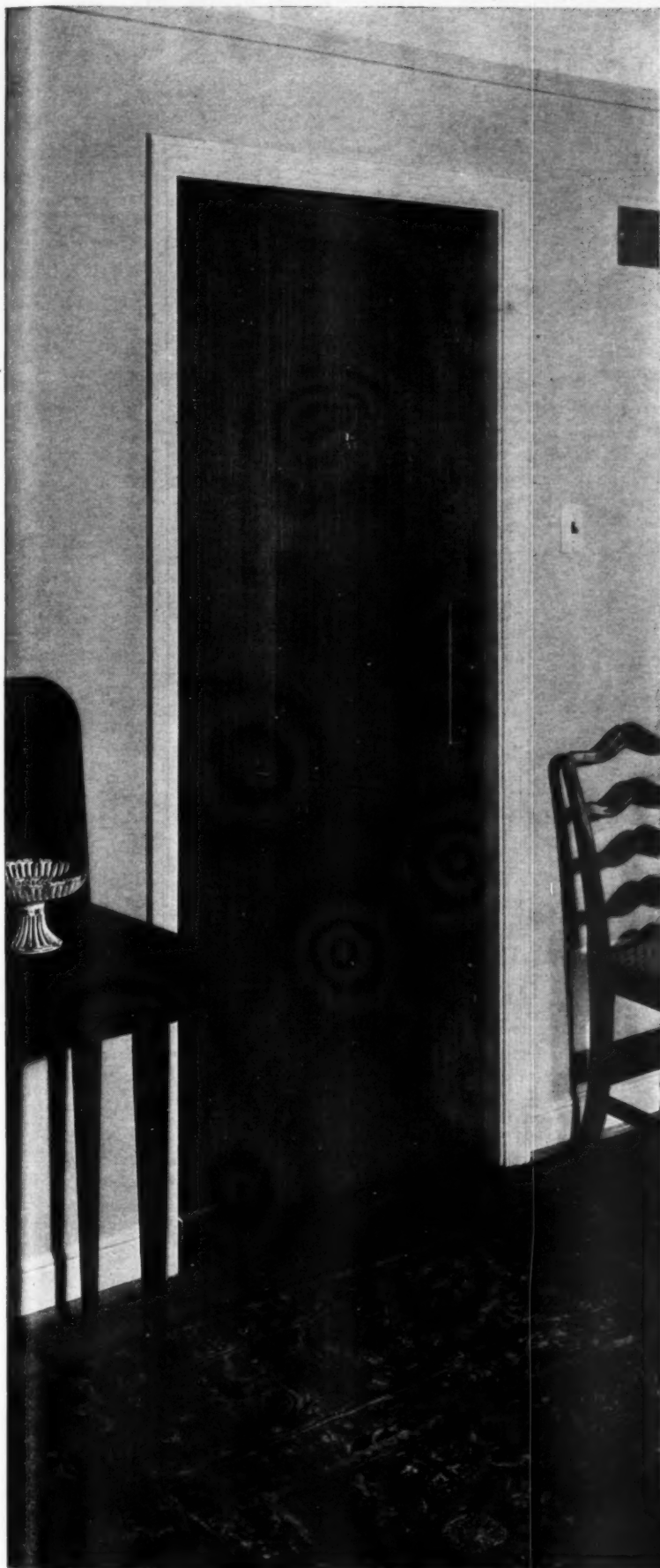
The Lehigh Service Department will be glad to give you more information, showing how the use of Lehigh Early Strength Cement, by saving all-important time, means more profits for you.

Lehigh

EARLY STRENGTH CEMENT for service-strength concrete in a hurry

LEHIGH PORTLAND CEMENT COMPANY • ALLENTOWN, PA. • CHICAGO, ILL. • SPOKANE, WASH.

★ ★ MENGEL FLUSH DOORS



Now Compete in Price with Panel Doors!

YES!—it's hard to believe, but it's *true*—you can now buy fine *Mengel Flush Doors* at practically the same price as good panel doors! And made in tremendous volume by The Mengel Company—America's largest producer of hardwood products—these low-priced flush doors are fully the equal of more expensive doors that are made in smaller quantities!

Mengel Flush Doors are being used by the thousands in all sorts of public and private jobs. All rails, stiles and faces are genuine hardwood. Patented grid cores. Extra-strong lock joints. Resin-bonded, hot-plate construction. Permanently sealed against air, moisture and dirt. And Mengel Doors are sturdy, too—by actual test, they easily survive 25,000 slams in a half-ton slamming machine!

Whatever you do, don't buy ordinary doors until you've at least *seen* these wonderful products at their new low prices. If your usual source cannot supply you, mail us the coupon below!

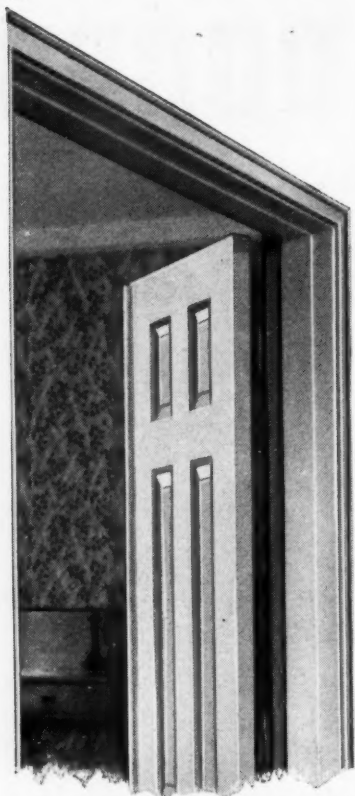
The Mengel Company, Incorporated
1124 Dumesnil Street
Louisville, Kentucky

Gentlemen: Please send me full information about Mengel Flush Doors ☐. . . Also about Mengelbord ☐.

Name

Address

City State



THE OPEN DOOR

TO BETTER CONSTRUCTION

"for the duration"

... AND AFTER

● Three types of building construction are moving ahead today—defense housing—remodeling—farm building. Stock doors, frames and windows of Ponderosa Pine fit *all three* markets.

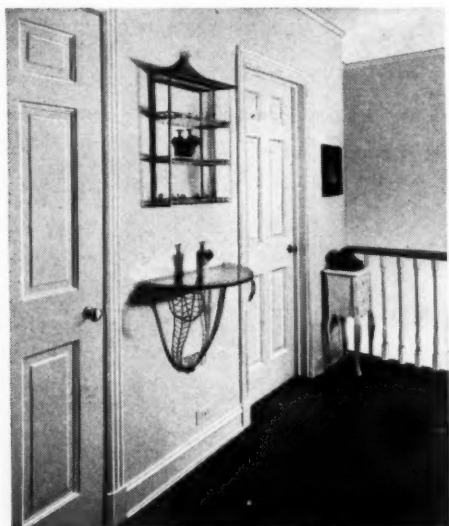
Ponderosa Pine offers you important time-saving and cost-saving advantages for any size or type of building. It is right for today's conditions—it has the advantages you need now—and is readily available when needed. Here are just a few of the many styles.



In the room shown above, interior doors of Ponderosa Pine provide better utilization of small space. Not only do these Ponderosa Pine doors contribute to convenience and assure comfort, but they possess, in themselves, unusual character and grace. Remember, Ponderosa Pine doors, frames and windows, being stock items, are *low in cost*.



In the kitchen above, note how the well-placed Ponderosa Pine windows increase the utility of work spaces by providing plenty of light. This light, strong wood has a close, uniform grain and an even textured surface which makes painting easy. That explains the use of Ponderosa Pine for kitchen cabinets—available as stock units in sizes and shapes to fit every requirement.



Readily available today, Ponderosa Pine doors, frames and windows are a definite aid in creating more convenience and charm in hallways, as shown at the left. Thanks to the availability of this versatile wood, and the wide selection of appropriately designed stock doors and windows, construction need never be held up awaiting delivery.

IN 1942—Ponderosa Pine advantages will continue to be featured. Last year, more than 100,000 copies of the well-known idea book "Open House" were distributed to consumers. This year, there's a new and even better edition of "Open House"—full of new ideas that fit today's building conditions. You'll want your copy. Just write us. *It's free.* Ponderosa Pine Woodwork, Dept. XAB-5, 111 West Washington St., Chicago, Ill.



Ponderosa Pine

WOODWORK

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New **POTOMAC** 5-foot cast iron recess wing bath, enameled inside — low sides, wide rim, flat bottom — built-in anti-siphon mixer fitting. **DELTON** 18 x 15-inch enameled cast iron shelf lavatory — 1½-gallon basin — two integral soap dishes. **TRYLON** vitreous china close-coupled washdown closet — round front bowl — sanitary TriKo coated seat. **PARKCHESTER** (below) 42 x 22-inch cast iron combination sink — 8-inch-deep basin for dishes, 13-inch-deep tub for laundry — mixer fitting, swing spout — acid resisting enamel.

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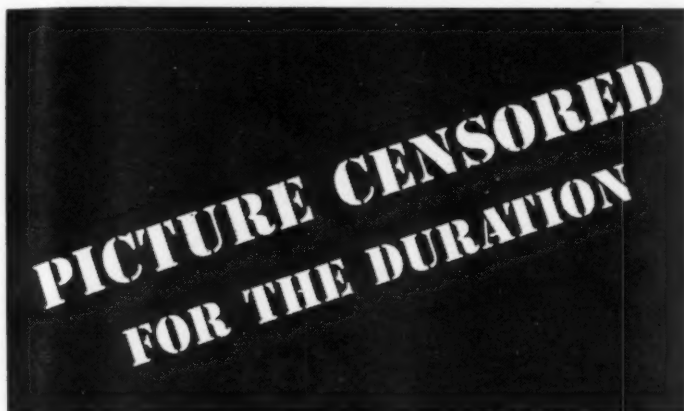
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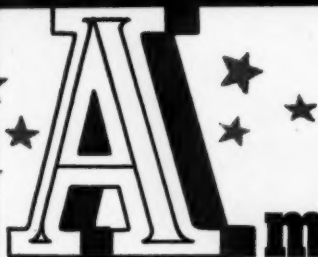
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AB-H-46

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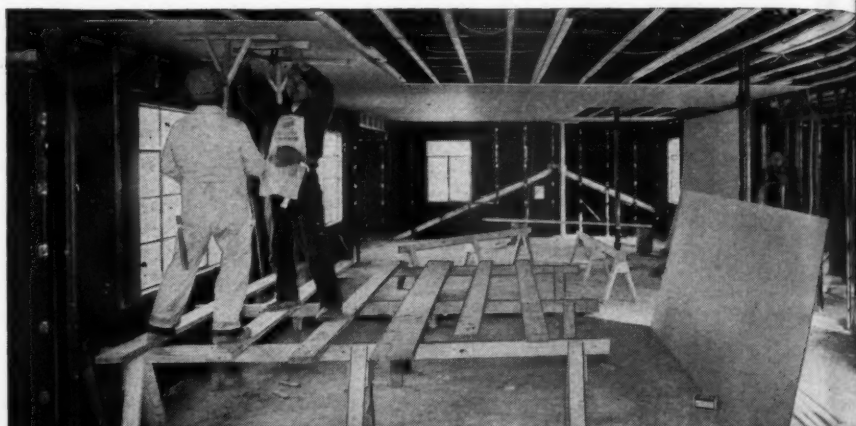


merica's Defense Housing contractors meet the test

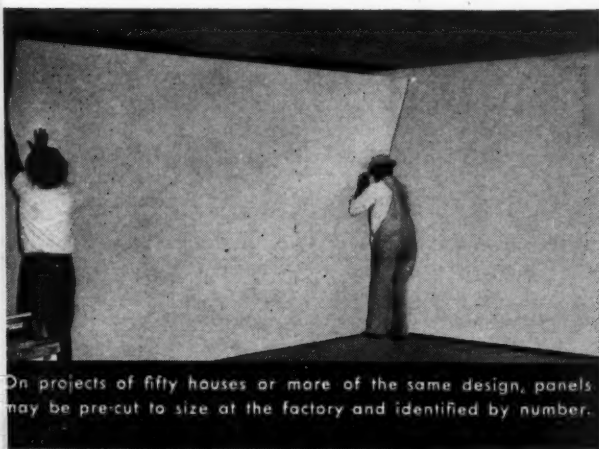
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● Already being figured in private FHA-financed projects, new *Upson STRONG-BILT Panels* are being hailed by contractors as one of the most remarkable of the new improvements destined to hasten the era of low-cost housing to follow the war.

By using Upson STRONG-BILT Panels, one-piece interior wall linings wholly or partly prefabricated in the shop or on the site can be included in today's plans. Upson Floating Fasteners and a new time-saving method of application complete this long-sought economy, providing dry-built construction *at its best*.



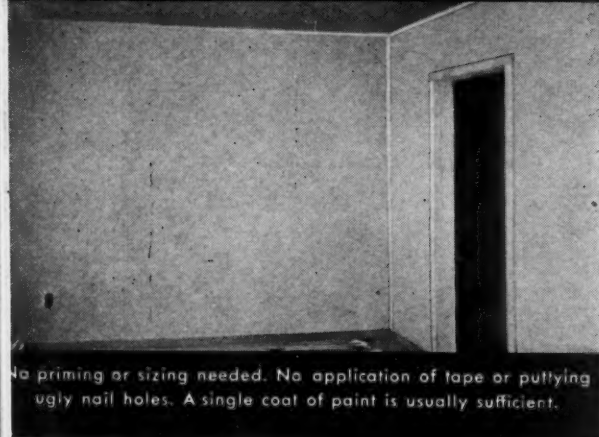
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UPSON STRONG-BILT PANELS

AMERICAN BUILDER

and Building Age

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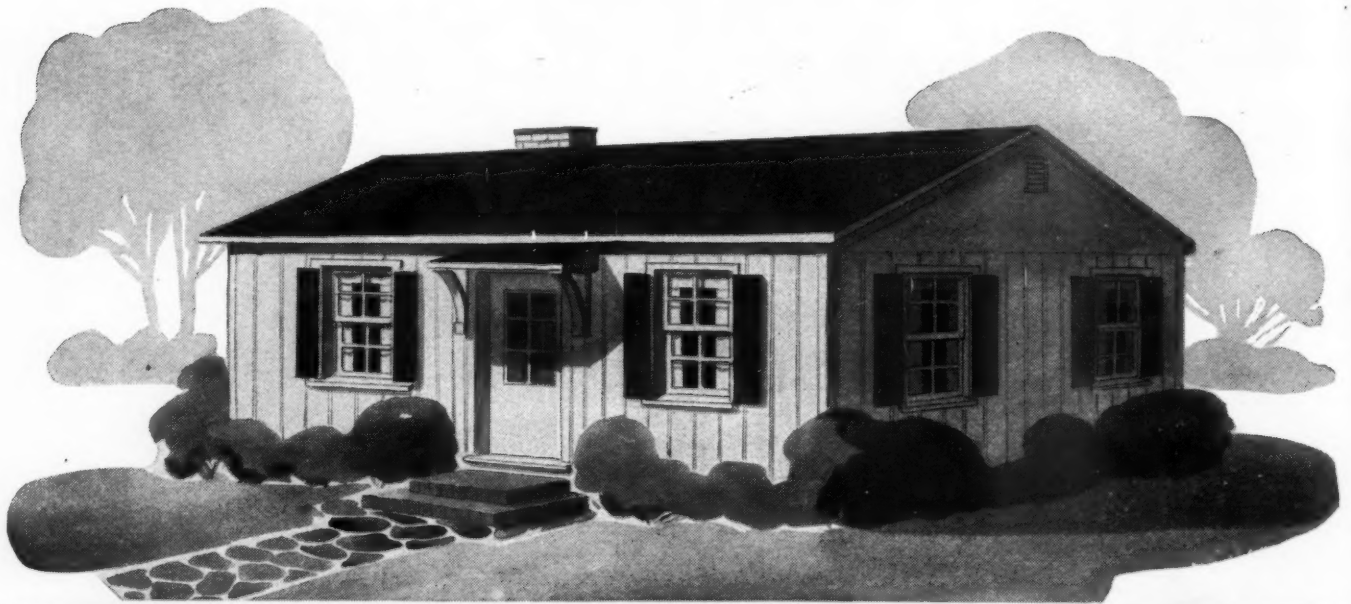
To help the dealer become a recognized leader for low-cost defense housing in his community, Gold Bond research has developed a brand new system of construction. This plan has the approval of Government authorities and meets F. H. A. specifications. It permits the local dealer

to prefabricate houses himself or participate in prefabrication by others. It can be handled by the average Gold Bond dealer without addition to his facilities or increasing inventory. It employs standard sizes of standard materials. It can be built either in your shop or on the job by regular carpenters or contractors. If you have not already seen this Plan Book, ask your Gold Bond representative to show you details and blueprints . . . at once!

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PUBLISHER'S PAGE

Helping Small Builders and Dealers to Help

NOTHING is more certain than that conditions will change or than that human nature will remain the same and have great difficulty in adjusting itself to the changes. We are now passing through the greatest changes in history, and as a nation and individuals, hard as it is, must adjust to them, or lose the war on the home front, and consequently on the foreign fronts. Our people have never lost a war, know we are potentially the strongest nation on earth, and, therefore, cannot yet believe we can ever lose a war. But we have been losing this one, may continue losing it, and are sure unnecessarily to protract it, unless our leaders, military forces and civilian population begin putting into it every ounce of brains and energy they can.

Our building industry is being called upon to do \$14 billion of construction this year. This includes war housing; war industrial plant expansion and remodeling; farm building to increase food production; repair and maintenance of homes, farm and commercial buildings (with no limit on costs), and remodeling or improvements of homes, farm buildings and commercial buildings (with cost limits of \$500, \$1,000 and \$5,000, respectively).

A HERCULEAN undertaking. How is it to be accomplished? Building is mainly a "small business" industry scattered throughout all our cities and towns. Heretofore publicity about war construction has been given to large plants erected by big architectural and engineering organizations. Hereafter, the big jobs will be outnumbered ten to one or more by smaller jobs the work and materials for which can be best supplied by local contractors and dealers.

The building industry has been criticized by some government spokesmen for

not getting organized and into action faster on war work. This criticism is unjust. Big construction companies can afford to send representatives to Washington and elsewhere to help make plans and get contracts. Small contractors cannot, but must have the jobs taken to them. And yet if the government's huge program is to be carried out, local builders and material dealers must be given opportunity to contribute as largely in proportion to total construction as they ordinarily do in peacetime. And if they don't, it will be because government officials fail to study this highly-decentralized, individualistic, private enterprise, small unit industry, and adopt plans in accordance with its unavoidable limitations but vast potentialities.

LOCAL builders and dealers will be eager to learn what materials they can use and on what stocks they can draw. They will need large quantities of equipment and tools. They will function efficiently with the great knowledge and experience they have if given guidance by government authorities and large contractors, and information by manufacturers about available materials, equipment and tools. *American Builder* will co-operate to the utmost in its editorial pages in disseminating ideas, plans and information to them.

But government, large contractors, and manufacturers must do their parts in this work. Only thereby can the small builders be enabled to play their far-flung but vitally important role during the war—and, equally important, be preserved in full vigor to perform their vitally important role in the nation's private enterprise system after the war.

Samuel O. Dunn,

SIMMONS-BOARDMAN PUBLISHING CORPORATION: SAMUEL O. DUNN, CHAIRMAN OF THE BOARD; HENRY LEE, PRESIDENT; BERNARD L. JOHNSON, ROBERT H. MORRIS AND J. S. CRANE, VICE-PRESIDENTS; ROY V. WRIGHT, SECRETARY; E. T. HOWSON, ASSISTANT SECRETARY; JOHN T. DE MOTT, TREASURER; EXECUTIVE AND EDITORIAL OFFICES: 105 WEST ADAMS STREET, CHICAGO; 30 CHURCH STREET, NEW YORK CITY.

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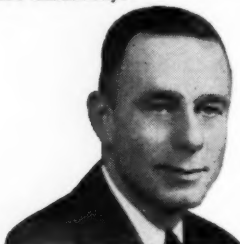
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AND BUILDING AGE

War Board's Building Conservation Order

1. **NOT a "freeze order," but a broad industry control to guide activity into needed war channels.**
2. **DOES NOT stop projects already started.**
3. **MAINTENANCE OR REPAIRS to keep structure "in sound working condition" are exempted from order and are completely unrestricted. No permit required.**
4. **PRIVATE HOME BUILDING in defense areas will be helped.**
5. **RESIDENTIAL REMODELING up to \$500 can be done anywhere without permit or restriction. Also private garages, porches, etc.**
6. **SHOPS, STORES, SHEDS and small commercial buildings up to \$5,000 can be built anywhere without permit.**
7. **FARM BUILDINGS up to \$1,000 value for each structure may be built.**

THE War Production Board's Construction Conservation Order L-41, which went into effect April 9, put an end to countless disturbing rumors, and effectively cleared the air.

While the order was drastic, it had the good features of setting down in black and white definite types of work permitted during this war and definite types that are not.

As the Order finally appeared, it was not a "stop building" or "freeze order" in the ordinary sense of these words. It is, rather, a general control on building activity to channel it into urgently needed war lines. Unfortunately, the newspapers of the country reported it in a way that gave the decidedly false impression that practically all building would cease. The facts are, as careful reading of the order will show (complete text is given on second page following) that a large volume of private building activity is permitted.

To correct these false impressions, we list the following important classes of building work that are to continue:

1. **DEFENSE HOUSING**—Any builder of private or public defense housing operating with a preference rating is not affected by the Order (Note section (b) (7) (i)). Builders of such housing will be helped rather than hindered by this order.

2. **COMMERCIAL JOBS**—Any builder in any area may build shops, stores and small commercial and industrial buildings costing less than \$5,000 without a permit or other restrictions of any kind. See section (b) (6). This leaves the field open for a considerable volume of building operations, particularly for small firms.

3. **MAINTENANCE AND REPAIRS**—Builders mainly concerned with maintenance and repair work are not affected by the order, as such work is *specifically*

exempted by the order (See section (a) (2)). However, maintenance and repairs are defined as keeping a building or structure "in sound working condition," or "restoration without change of design to sound working condition when rendered unsafe or unfit for service by wear and tear, damage or other similar causes."

Thus, it appears that any type of maintenance or repair that conforms to this type of definition may be carried on anywhere in the country without permit or without restriction of any type as to price or nature. This would appear to be assurance to the nation's home owners, farmers and factory owners that they will be able to keep their structures in proper shape during the war. It will permit reroofing, repainting and a large amount of essential repair work.

4. **REMODELING JOBS**—The order permits any type of residential building job costing less than \$500, within a 12-month period, without permit or restriction. This will, therefore, permit such small remodeling jobs as the addition of a porch, fixing up the basement or attic, and a host of other home construction operations that are possible under \$500.

Private garages and other structures normally associated with residential construction may also be built under this \$500 figure.

5. **FARM STRUCTURES**—More than one farm building may be built on any one farm provided the cost does not exceed \$1,000 per building.

Residential construction on the farm is subject to the same \$500 limitation as other residential construction.

Obviously this farm section (b) (5) provides a liberal opportunity for the builders and suppliers of such structures to help the farmer expand his plant to keep pace with expanding agricultural production.

6. **REMODELING IN DEFENSE AREAS**—Home remodeling to add needed living space in defense areas is not only exempted from the order but is now given special

Opportunity for the Small Builder

UNDER the War Production Board's building Conservation Order, small builders and small building jobs get the first "break" they have had in a long time. Builders who specialize in roofing, painting, repairs, small remodeling jobs and home maintenance will be able to operate without having to obtain permits.

BUILDERS of small shops, stores, commercial buildings, private garages, sheds and a host of other structures (as long as they do not cost more than \$5,000) may operate anywhere without restriction and are not required to obtain permits.

SMALL RESIDENTIAL and commercial jobs such as these require very little critical material and will be able to proceed without red tape since they are expressly exempted by Order L-41. See sections (a) (8) and (9), Maintenance and Repairs; (b) (6).

priority of the highest rating. Since more than 300 communities, representing about two-thirds of the population of the United States, are included in defense areas, a great and important field for private builders is left open.

7. DEFENSE WORK—All types of construction work for the Army and Navy, and work on which a priority rating has been given, such as defense housing and defense plants, is permitted.

8. SPECIAL PERMITS—In addition to all of the foregoing, section (f) (2) and (3) provides a means by which builders in any area may apply for permission to build any type of structure that they consider is "important to the war effort," or supplies an "essential civilian need." Applications for such jobs are made at the nearest Federal Housing Administration office on Forms PD-200 and PD-200A. The builder is asked to submit information as to the need for the proposed construction or to state any exceptional hardships which the lack of such building would cause.

This provision, it would seem, will make it possible for builders anywhere in the country to perform any type of work for which there is a legitimate need. For example, where a home shortage exists and the need can be shown, even though it is not a defense area, permission may be

secured to build. Many other types of structures essential to civilian welfare will also come under this classification, and it is probable that, particularly where materials and labor are available in plentiful supply, many such projects will be approved without question.

Where a builder has doubts about whether a project is essential or not, the best practice will be for him to fill out a form and apply for a permit immediately to the FHA to get a decision. The FHA officials, however, do not actually make this decision but transmit his request to the nearest WPB office or to Washington.

Order L-41 does not halt jobs already under construction, and in section (a) (6) defines what it means by saying that to begin construction means "physically incorporating into any construction, material which is an integral part of the construction."

The War Production Board stated that it reserves the right to halt a job already under way if the scarce materials to be used can be put to more effective use in the war program. It is generally felt that such action is not contemplated except on a few particularly large projects.

Considerable speculation exists as to how the order may be enforced. Section (b) makes the Order equally

(Continued to page 102)

Questions & Answers on Order L-41—Official from Washington

THE WAR Production Board on April 17 issued the following questions and answers regarding Conservation Order L-41, placing non-essential construction under rigid control:

Q. The site for a building has been staked off. A building permit from the city has been issued. All the materials have been paid for and delivered to the site and men are excavating. Does this constitute beginning construction?

A. No. Under the terms of the order, construction is "begun" when materials have been physically incorporated into the building itself.

Q. The foundation for a house was laid last fall but work was postponed during the winter. Can the owner, without authorization, build the house on this foundation?

A. Yes.

Q. A person has received a Federal Housing Administration loan to build a house but construction was not begun before April 9. Does the approval of the Federal Housing Administration loan constitute authorization to start construction?

A. No. Residential construction costing \$500 or more not begun before April 9 cannot be started without specific authorization from War Production Board.

Q. The owner of a cottage has received an order from the State Government to move his dwelling inland some distance from its present location on the seashore. Does this order constitute an authorization when the cost of building new foundations will be more than \$500?

A. No. Authorization has to be obtained from the War Production Board.

Q. A man plans to build a house himself with help from other members of his family who will receive no compensation. The total financial outlay is less than \$500; does he have to receive authorization to commence construction?

A. Because the total cost is less than \$500, no authorization is necessary.

Q. A residence was burned down Christmas day. The owner has all material on hand for rebuilding on foundations which were not damaged by the fire. Can he build without authorization?

A. No. Authorization is required to begin construction to replace houses destroyed by fire unless the fire occurred on or after January 1, 1942.

Q. A house was destroyed by fire in February, 1942. Can the

owner receive priority help in restoring the dwelling as he cannot otherwise get the necessary material?

A. No blanket provision for priority assistance in such cases has been established. The owner is permitted to begin construction without authorization (because the fire occurred since January 1, 1942), but if he needs priority assistance, he can apply for such help as though his house were a new construction project. There is no assurance, however, that it will be granted.

Q. A builder has material on hand to construct a house. He is unable to get authorization to begin construction. Does the government assume any responsibility for the disposal of this material?

A. No.

Q. A manufacturer of tile roofing has received an order from a supplier. Can the manufacturer fill the order?

A. Yes, unless he knows or has reason to believe that the material will be used in an unauthorized project.

Q. A land owner has purchased second-hand equipment to drain his plantation. The cost of labor will exceed \$1,000. Do projects of this type involving no work other than ditch digging fall under the ban placed by L-41?

A. No. If no materials are to be used in the project, he can dig as many ditches as he wants.

Q. Because of increased production requirements at a coal mine, the company owning the property desires to build additional houses for use by miners needed for increased operations. Is it necessary for the company to get authorization?

A. Yes.

Q. An owner has been ordered by City Building Inspectors to install a fire escape on an apartment before his housing permit will be renewed. The cost of the installation is more than \$500. Does the order from the City Inspectors constitute authorization for him to begin construction?

A. No. Because the remodeling costs more than \$500, the owner has to get authorization from the War Production Board.

Q. Plans have been made for the construction of a highway. Grading has been completed. Equipment is on the site. Pouring of concrete, however, has not begun. Does this, under the terms of the order, constitute beginning construction?

A. No. Authorization must be requested, but in cases such as this, the chances for approval are better than for projects in a less advanced stage.

COMPLETE TEXT OF WAR PRODUCTION BOARD'S CONSTRUCTION CONSERVATION ORDER L-41—EFFECTIVE APRIL 9, 1942

War requirements of the United States have created a shortage of all materials required for war production and construction necessary thereto, for private account and for export; the War Production Board accordingly has stated as its policy that it is in the national interest that all construction which is not essential, directly or indirectly, to the successful prosecution of the war, and which involves the utilization of labor, material or construction plant urgently needed in the war effort, be deferred for the duration of the emergency; the following order is, therefore, necessary and appropriate in the public interest to conserve scarce materials by allocating them to essential uses and restricting their use in non-essential construction.

Section 1075.1 — CONSERVATION ORDER NO. L-41

(a) DEFINITIONS. For the purpose of this Order

- (1) "Person" means any individual, partnership, association, business trust, corporation, governmental corporation or agency, or any organized group of persons, whether incorporated or not.
 - (2) "Construction" means the erection, construction, remodeling or rehabilitation of any building, structure or project, or additions thereto or extensions or alterations thereof, but not including maintenance or repair as defined in paragraphs (a) (8) and (a) (9) below.
 - (3) "Residential Construction" means any Construction where the principal function of the building, structure or project is or will be to provide living space or accommodations, including, but not limited to, single or multiple dwelling units, dormitories, hotels, and apartment houses.
 - (4) "Agricultural Construction" means any Construction, other than Residential Construction, where the building, structure or project is used in the production of agricultural products including, but not limited to, those produced by farmers, planters, ranchmen, dairymen, or nut or fruit growers.
 - (5) "Other Restricted Construction" means any Construction, other than Residential and Agricultural Construction, including but not limited to commercial, industrial, recreational, institutional, highway, roadway, sub-surface and utilities construction, whether publicly or privately financed.
 - (6) "Begin Construction" means to initiate Construction by physically incorporating into any Construction material which is an integral part of the Construction.
 - (7) "Cost" is meant to include the total cost of labor and material, including equipment, architects', engineers', and contractors' fees, insurance charges and financing costs.
 - (8) "Maintenance" means the upkeep of a building, structure or project in sound working condition.
 - (9) "Repair" means the restoration, without change of design, of any portion of a building, structure or project to sound working condition, when such portion has been rendered unsafe or unfit for service by wear and tear, damage or other similar causes.
 - (b) **PROHIBITED CONSTRUCTION.** No Person shall, after the date of issuance of this Order, Begin Construction, or order, purchase, accept delivery of, withdraw from inventory or in any other manner secure or use material or construction plant in order to Begin Construction, unless the Construction is within one of the following classes:
 - (1) The Construction is to be the property of the Army or Navy of the United States, of the United States Maritime Commission, the Panama Canal, the Coast and Geodetic Survey, the Coast Guard, the Civil Aeronautics Authority, or the Office of Scientific Research and Development.
 - (2) The Construction consists of any building, structure or project which is used directly in the discovery, development or depletion of mineral deposits.
 - (3) The Construction is of a type subject to the provisions of any order in the M-68 series relating to the production and distribution of petroleum. Any such construction is permitted only to the extent authorized by the applicable order in the M-68 series.
 - (4) The Construction is Residential and
 - (i) the estimated Cost is less than five hundred dollars; or
 - (ii) is to reconstruct or restore Residential Construction damaged or destroyed after December 31, 1941, by fire, flood, tornado, earthquake, act of God or the public enemy.
 - (5) The Construction is Agricultural and the estimated Cost is less than one thousand dollars.
 - (6) The Construction is Other Restricted Construction and the estimated Cost is less than five thousand dollars.
 - (7) The Construction has been or is hereafter authorized by the Director of Priorities of the Office of Production Management or by the Director of Industry Operations by the issuance of
 - (i) one of the Preference Rating Orders or Certificates listed on Schedule A attached hereto, as that Schedule may be amended from time to time, according to priorities assistance to the Construction; or
 - (ii) an order specifically authorizing the Construction.
- Provided, however, that the exceptions set forth in paragraphs (b) (4) (1), (b) (5), and (b) (6) shall not be construed to authorize separate or successive Construction operations the aggregate Cost of which over any continuous twelve month period exceeds the amount specified in the applicable paragraph for the particular building, structure or project.
- (c) **PROHIBITED DELIVERIES.** No Person shall accept an order for, sell, deliver, or cause to be delivered, material or construction plant which he knows, or has reason to believe, will be used in violation of the terms of this Order.
 - (d) **FURTHER CONSTRUCTION LIMITATIONS.** Nothing in this Order shall be construed to authorize the use or delivery of any material, or the application or extension of any preference rating, in violation of the provisions of any conservation, limitation or other order or regulation heretofore or hereafter issued by the Director of Priorities, Office of Production Management, or by the Director of Industry Operations.
 - (e) **ORDERS OR CERTIFICATES NOT CONSTITUTING AUTHORIZATION.** The assignment of a preference rating by a PD-1, PD-1A or other certificate, or by any order other than those listed in Schedule A, shall not constitute authorization to Begin Construction.
 - (f) **APPLICATIONS FOR AUTHORITY TO BEGIN CONSTRUCTION.**
 - (1) If the applicant requires priorities assistance for the proposed construction, an application shall be made for the appropriate Preference Rating Order or Certificate listed on Schedule A on the form referred to therein.
 - (2) Where the applicant does not require priorities assistance, application for the specific authorization to Begin Construction referred to in Paragraph (b) (7) (ii) hereof may be made by filing Forms PD-200 and PD-200A, or such other forms as may hereafter be prescribed, together with a statement showing (1) that no priorities assistance is requested, (2) whether any previous application for authorization has been denied, and, if so, reasons therefor, and (3) the total value of all Construction on the particular building structure or project in the preceding twelve month period. Such forms or statements are to be filed with the field office of the Federal Housing Administration having jurisdiction over the location of the site.
 - (3) In applying either for priority assistance or for authorization to Begin Construction, the applicant should also submit additional information as to the necessity for the proposed construction, any exceptional hardships which the restrictions of this Order impose upon him, the effect on employment conditions if the application is denied, and any other pertinent facts.
 - (g) **VIOLATIONS.** Any person who wilfully violates any provision of this Order or who wilfully furnishes false information to the Director of Industry Operations in connection with this Order is guilty of a crime, and upon conviction may be punished by fine or imprisonment. In addition, any such person may be prohibited from making or obtaining further deliveries or from processing or using material under priority control and may be deprived of priorities assistance by the Director of Industry Operations.
 - (h) **COMMUNICATIONS.** Applications, communications and reports under this Order shall, unless otherwise directed, be addressed to:

War Production Board
Washington, D. C. Ref: L-41

Those relating to Residential Construction shall in addition be conspicuously marked "Res.", those relating to Agricultural Construction "Agr.", and those relating to Other Restricted Construction, "O.R."
 - (i) **EFFECTIVE DATE.** This Order shall take effect immediately. Issued this 9th day of April, 1942.

J. S. KNOWLSON,
Director of Industry Operations.



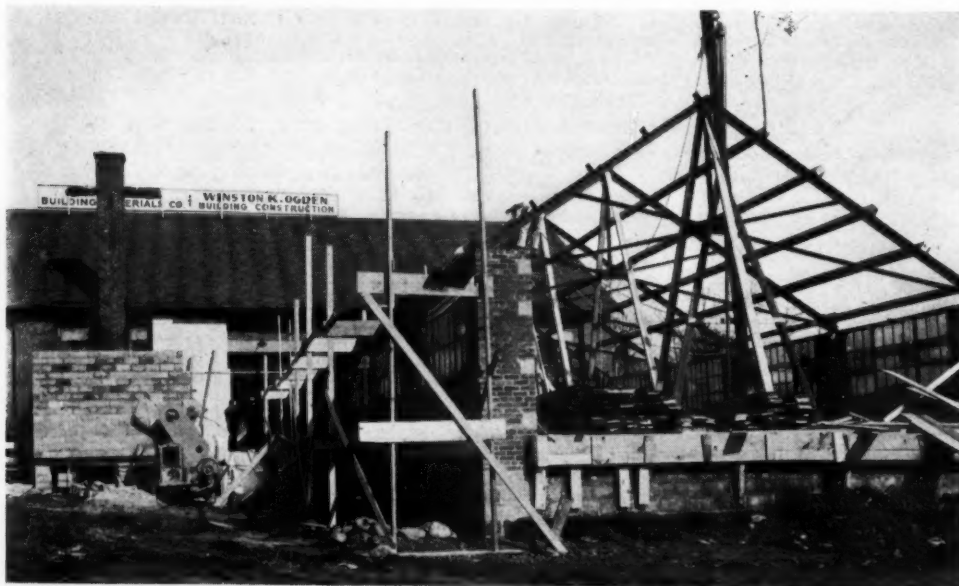
BUILDER WINSTON K. OGDEN, center, explains to *American Builder* editor how he solved difficult cut in making ammunition boxes—converting his organization 100 per cent to war work.

Bomb Box Order Keeps Builder Busy

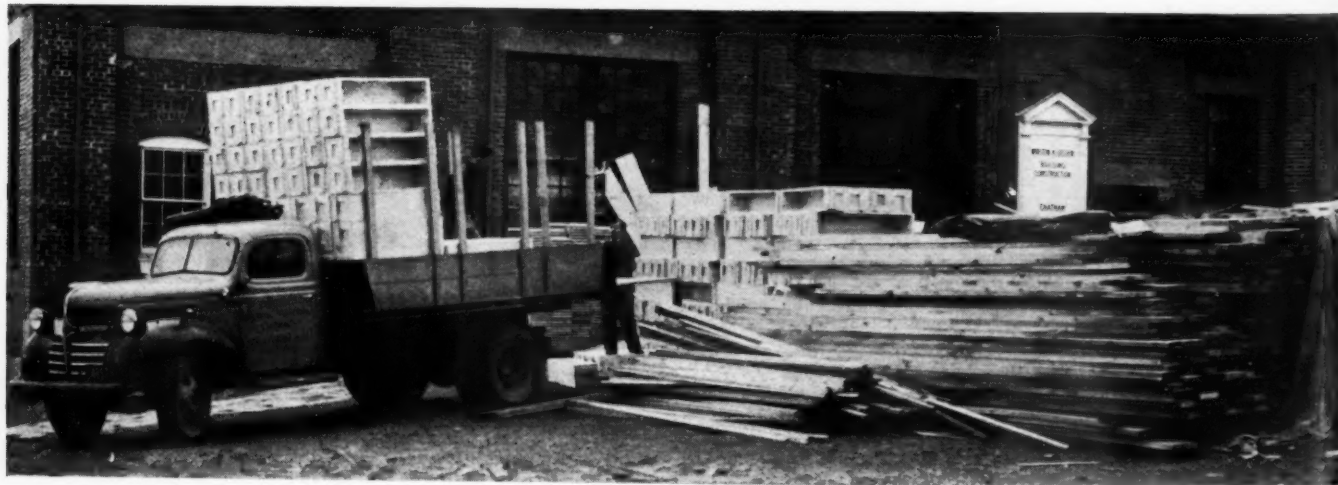
Puts power equipment to work on government job after long search for small subcontract

THERE are numerous opportunities for builders, material dealers and millwork firms to take on defense jobs other than housing or construction. The war effort has created a great demand for ammunition boxes, crates, cribbing, lookout towers, landing platforms and other products which such firms should be well equipped to build.

Not only are subcontracts to take on jobs of this type desired, but one of the most difficult problems—financing—is being handled by the recent Presidential order permitting the guarantee of loans needed by small firms for participation in war production. The order permits the Army, Navy or Maritime Commission to enter into contracts with the RFC, any Federal Reserve Bank, or any other financing institution protecting them against loss of principal or interest on commitments for financing war output. Automobile finance companies are said to be interested in loans of this type.



NEW ADDITION to Ogden's plant to accommodate his crew building ammunition boxes.



LOADING completed boxes on one of Ogden's trucks. Note part of big lumber order piled in front of office.

HERE'S ONE WAY to keep in business if you can't build defense housing:

UNCLE SAM needs ammunition boxes, crates, cribbing, lookout towers, field kitchens, furniture, landing platforms and numerous other items of wood. See subcontract division of the nearest WPB office.



RADIAL SAW in use on Medical Center, last job Ogden did before converting to war work.

The War Production Board has established offices in numerous cities where builders may obtain lists of needed items on which they may bid.

Such jobs are permitting many building industry men to keep their organizations together and to make use of power equipment they have, and in many cases add to their equipment.

One of the best illustrations recently called to the attention of *American Builder* is that of Winston K. Ogden, a New Jersey builder with 20 years experience, who is also interested in a building material yard. He has been a long-time user of power equipment, and in addition to setting up latest type radial saws on his jobs, had a small millwork shop where he did most of his own work.

Ogden is young, energetic, and not one to sit still and let his business disappear in times like these. He decided to go after some kind of war work. He testifies that it was not easy—he had to spend countless hours and many fruitless calls seeking such jobs, and made numerous bids.

Finally, however, he landed an order for (deleted by U.S. censor) boxes to hold incendiary bombs. This was just a small part of a huge order. But it was a lot of boxes in any man's language. It will keep Ogden and his crew busy day and night for many months.

Like most military orders, this is a rush job, and in order to turn out the work fast enough Ogden required more room, which he is providing with a rather extensive addition at the rear of his plant.

Ogden acquired his experience with power tools over a period of years. On his last job, which was an attractive medical center, he used a Walker-Turner Radial Saw in



OGDEN beside same machine as shown above but now converted to war work.

cutting the rather intricate wall and roof framing. He estimated that the saw meant a saving of some 200 to 225 man hours, which at present labor rates is a tidy sum. Of even greater interest to Ogden was the fact that his saw made possible uniform cuts and exact fitting.

"I have been accused by my competitors of 'building boxes' at times in the past," Ogden told *American Builder*. "Now I actually am, and it's not as simple as it sounds." He pointed out that the boxes have to be built to very exacting specifications and equipped with various types of cleats and braces that require some fairly intricate saw cuts. With his small crew he has to produce a good many thousand boxes a month, which calls for fast work. He will use large quantities of lumber and nails.

Included in the equipment in his small plant prior to the job was a band saw, drill press, jig saw, jointer and several table saws. When he landed this job, Ogden was fortunate in obtaining two automatic nailing machines.

Fabricating Timber Structures for War Production

WITHIN the last few years the use of timber for bridges, warehouses, towers, factories, shipyards, and railway structures has greatly increased. This trend was evident prior to the intensification of the war effort, which makes many construction metals difficult to obtain. Timber is more of an engineering medium today than it was ten years ago. With the expansion of facilities for the fabrication of building parts, particularly trusses, timber engineering has, in a measure, developed a new science consisting of accurate engineering and new formulae.

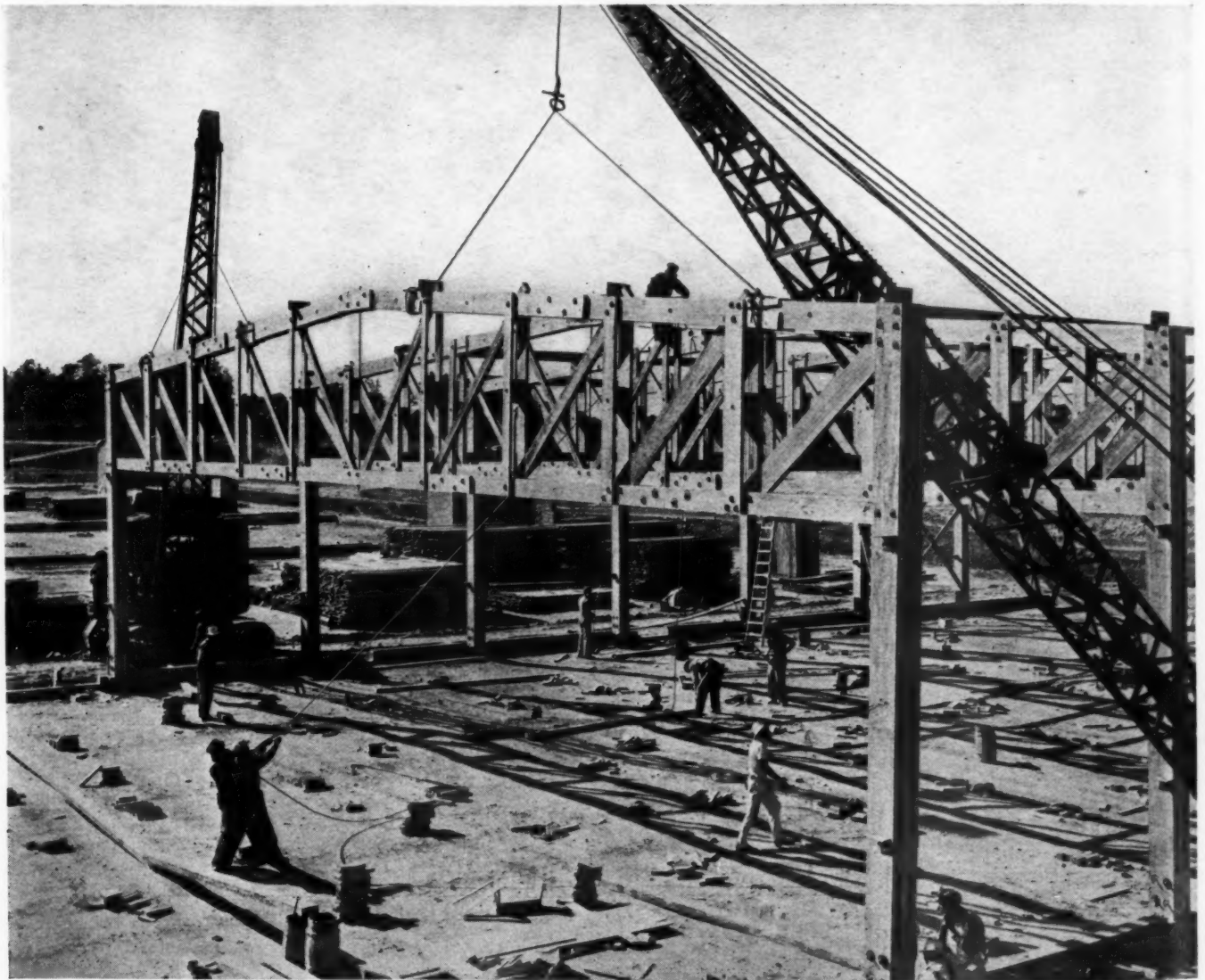
It is probable that the *connector* system of timber construction introduced to America from Europe by the lumber industry has, in a large measure, been responsible for the elevation of wood beyond a carpentry status to an engineering medium.

Timber connectors are metal fastenings that strengthen and increase the efficiency of timber joints. They hold adjoining timbers together more rigidly than bolts or nails and, because they reduce bulk needed for strong connections, they enable lighter members to carry loads

which formerly required heavy timbers when fastened by plates, angles, and bolts. Connector construction increases the efficiency of framing members. And a pound of connectors and miscellaneous iron used in timber construction does the work of 10½ to 11 pounds of metal in steel construction.

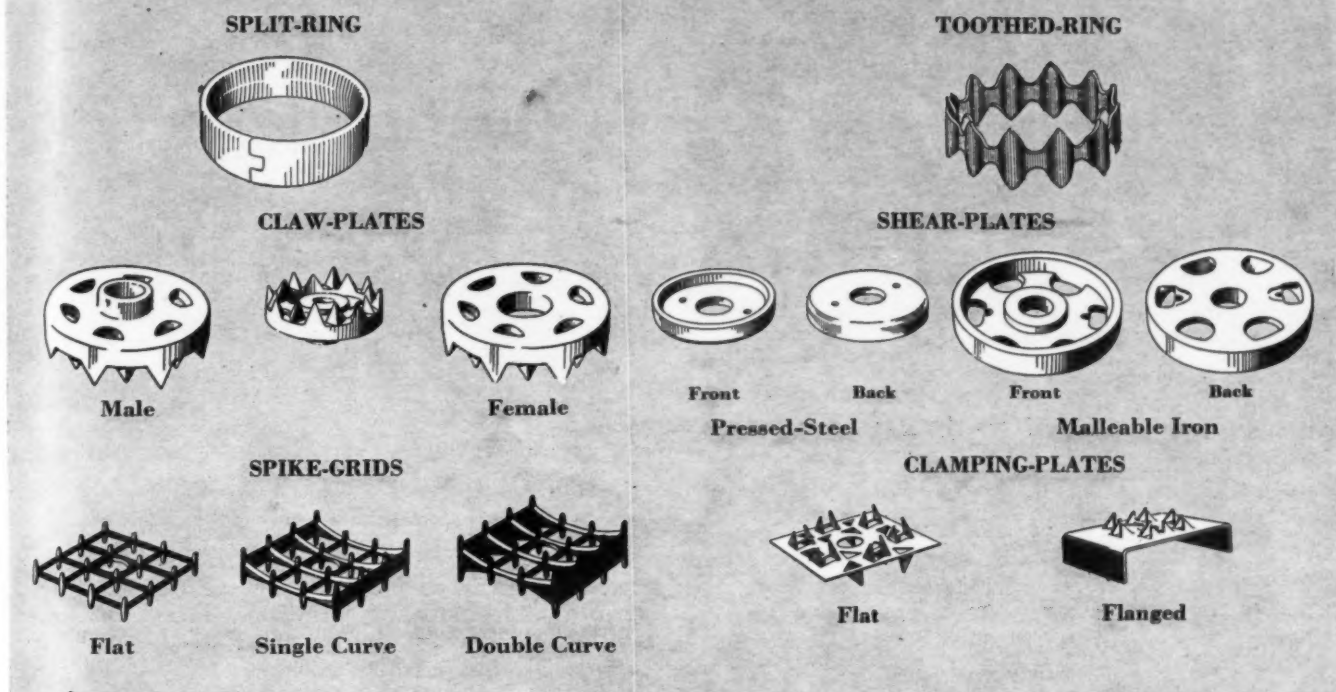
The two most commonly used types of connectors are the split ring and the toothed ring. The split ring fits into a pre-cut groove, half of the ring in the face of each of two adjoining timbers. A tongue-and-groove split in this type of steel ring permits simultaneous bearing of the ring against the core and the wood outside the core, resulting in an efficient joint. Grooves for split rings are cut with a special tool, usually operated in a power drill, but sometimes in a carpenter's brace.

Toothed rings have, as their name indicates, teeth on both sides of a metal ring. They are embedded into the contact faces of the timbers by pressure. A special embedding assembly consisting of a high-strength rod, ball bearing washer, and ratchet wrench, or nut runner, is usually used for toothed ring installation. When the joint



ROOF TRUSS with supporting columns attached being hoisted into position on Army Shop Building. Truss is 75 foot span, 15 feet o.c. Robert & Co., architects; Central Contracting Co., Beckham & Brooks, contractors, Atlanta, Ga.

TYPES OF TECO TIMBER CONNECTORS



is drawn together, the high-strength rod is removed and replaced with a machine bolt and washers.

Toothed rings carry lighter loads than split rings and are therefore used in thin structural members, or for construction jobs where grooving is difficult because of lack of power.

Factory-fabrication methods are particularly applicable to this type of timber construction. Special methods and techniques for the production of timber structures have developed simultaneously with the growth of the connector system. Timber structures may be manufactured in specialized fabrication shops or they may be built on the job by a builder employing shop methods.

The builder has a choice of two ways of obtaining connector-fabricated timber. He can buy factory-built parts of wood in the same way in which he has been accustomed to buying steel, or he can fabricate parts on the job with streamlined production methods. Let's take a timber truss, typical of the structural members which can be improved by using connector construction, to show how to fabricate with connectors.

If a builder decides to build on-the-job trusses, his method will vary according to the size or complexity of the job. For a few simple trusses, all alike, he will cut his lumber to size and shape from working drawings. He will nail or clamp the pieces together on a large flat surface and bore all the bolt holes, making sure they are perpendicular to the face of the timber. He will then mark each piece, take the pieces apart, cut the grooves in which the connectors fit, and put the pieces back together again in their original positions with connectors and bolts. The only trick is to keep the bolt holes perpendicular and the truss level while putting it together.

On a building where trusses are large or of several different kinds and sizes, or where there are a great many like units—trussed rafters, for instance—a production line like that of an automobile factory is set up.

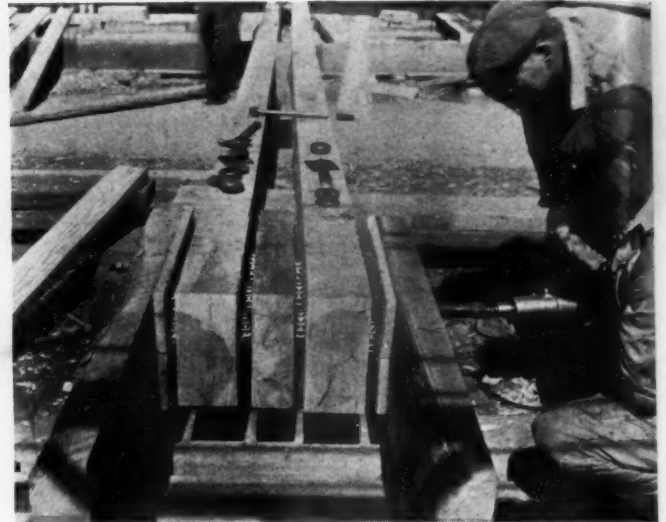
First templates are made as boring, sawing, and groove-cutting guides. There must be a pattern for each member of the truss. When the patterns are ready, lumber is



CUTTING grooves for 4-inch split rings with 3/4-inch electric drill.



MARKING location of bolt holes using template equipped with special punches which automatically spring back after being driven.



EMBEDDING toothed rings in trestle bent with "nut runner" and high strength rod. Special chuck allows rod to project beyond nut.

delivered to one end of the production line. Here it is clamped to the pattern, and all saw cuts, bolt holes, and grooves indicated on the pattern are marked on the piece of lumber. It is also identified according to the designation on the template, for final assembly.

The pattern is then removed and the piece of lumber, which may be a part of a chord or a splice plate, goes down the line until it reaches the cut-off saw. A fixed-position saw cuts it quickly and accurately according to the pattern marks. Then it rolls on to the boring machine where the bolt holes are bored, thence to the grooving machine. Sometimes the boring and grooving machines are a combination tool in a drill press. The drill press insures perpendicular bolt holes, an absolute essential.

Sawn to shape and size, marked for identification, bored for bolts, and grooved for connectors, the piece of lumber leaves the production line to be stacked for assembly. Stacking is carefully done to keep all pieces in line.

In the production line described, timbers are cut immediately after marking, but sawing may be done at any convenient time during fabrication. Pieces may be marked for sawing and boring from shop drawings instead of from templates. The same care in locating and boring holes is required as when templates are used.

Accurate marking is of the utmost importance. Tem-

plates or truss pieces which will be handled again and again should be marked with painted numbers. Pieces which are to be assembled without much handling can be marked with graphite crayon or blue kiel. Pieces which are to be treated after fabrication should be marked with metal numbering strips or stamped markings. Numbers or letters or a combination of the two should be used, depending on the extent of the structure.

A working platform is used for assembly of the different parts of a truss. Connectors are set in their grooves, bolts and washers inserted, and the joints tightened. If the builder is using toothed rings, which are embedded by pressure and require no pre-grooving, the rings are inserted on the working platform. In this case, the platform must have openings to provide working space for inserting and removing the high-strength rod. Or, if the job is too big to use hand equipment, a hydraulic jack in a suitable frame is used, which assembles the toothed ring joints with same speed used in boring and sawing.

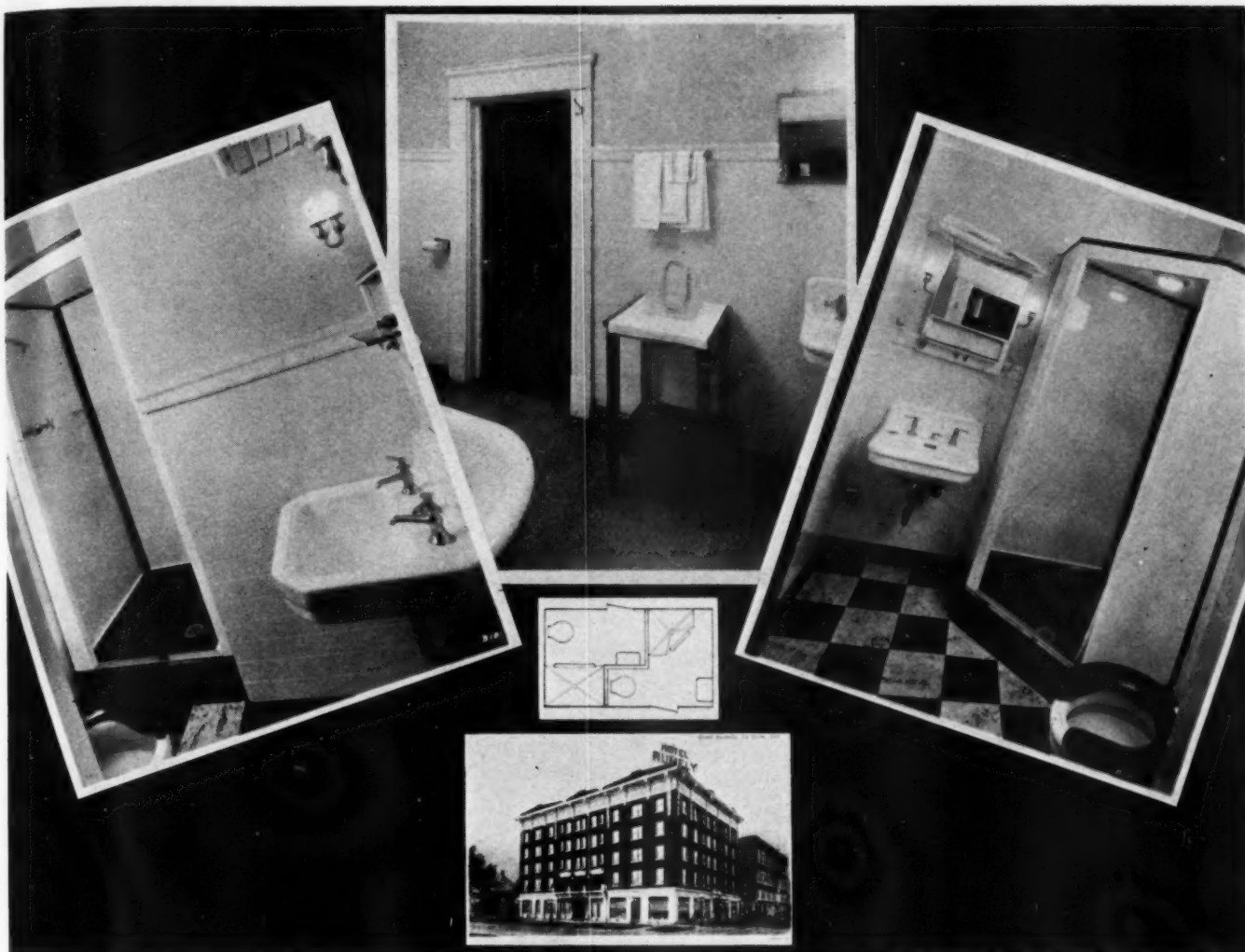
Erection of the completed truss is done by a movable crane, or a gin pole or "A" frame. The crane is the most efficient. Lines are attached to the truss in such a way as to prevent sagging in the top chord, which would strain the joints. Trusses are raised into position one after another, sometimes four or five an hour.



TRIMMING truss part to specifications using positioned saws, one making a square cut and the other a diagonal cut.



CUTTING split ring grooves at fabricating plant. Note radial acting frame which holds drill for convenience in spotting bolt holes.



Two Baths Where One Was Before

**Indiana Hotel Remodeled to Double Bathroom Efficiency
Shows How to Save Space on Many Other Types of Housing**

THE photographs above tell an interesting story of increased utility of living space in a hot war-industry area, LaPorte, Ind., one that can be applied to other types of projects which create additional living quarters through conversion of larger units into smaller ones.

Two bathrooms for one—or sixteen for eight, to be exact—is the score at the Hotel Rumely of that thriving center. When Bachman Brothers, contractor-dealer of LaPorte, and John Wolf, manager of the Rumely, went into a huddle to decide the modernization course to be taken, things were not as they now are.

The photograph at top center glimpses the type of bathroom which the Rumely offered its guests. The rooms were clean but they hardly provided the hotel's guests with the desired equipment. With space at a premium, the lack of bathrooms was a distinct liability.

The baths, as they stood before modernization, were much roomier than necessary. Each of the baths was situated between two of the guest rooms, but was connected to but one of them.

As an initial venture it was decided to modernize two or three of the bathrooms and, if this proved successful, to proceed with other rooms in the future.

After conferring on the various courses open it was decided that the large rooms should be divided to form two smaller, more compact and therefore more efficient

bath units. The necessary changes were really basically simple. The old fixtures were removed and a partition installed as shown in the small sketch.

Shower cabinets were chosen for installation because of their compactness and also because of the note of modernity which they added to the bathrooms. The combined floor area of the new bathrooms is no greater than that of the single large room but, nevertheless, each room is equipped with shower cabinet, lavatory, water closet and accessories.

Following the installation of the initial three units, comments of guests indicated that it would pay to complete the changeover throughout; this was then done.

• New U. S. Order Aids Remodeling

SUPPLEMENTING Conservation Order No. L-41, the War Production Board on April 9 issued an order to aid low-cost home remodeling in critical defense areas. This order assigns a high preference rating to deliveries to builders and subcontractors of materials entering into low-cost remodeling projects in defense areas. It is limited to projects for which the cost of materials now on the "Critical List" does not exceed an average of \$100 per room for each dwelling unit. The scarce materials for each structure cannot cost more than \$800.



PLYWOOD FORMS used by A. P. Orleans as he speeds another two streets of row houses for Philadelphia war workers. This striking progress picture shows various stages which was started in February. Advance sales totaled 180 in three weeks.

Philadelphia Builders Rush Row Houses Under Title VI for Rent or Sale



HBA BUILDERS inspect row job. A. P. Orleans, who built 750 last year, stands in the center, holding a rolled-up blueprint.

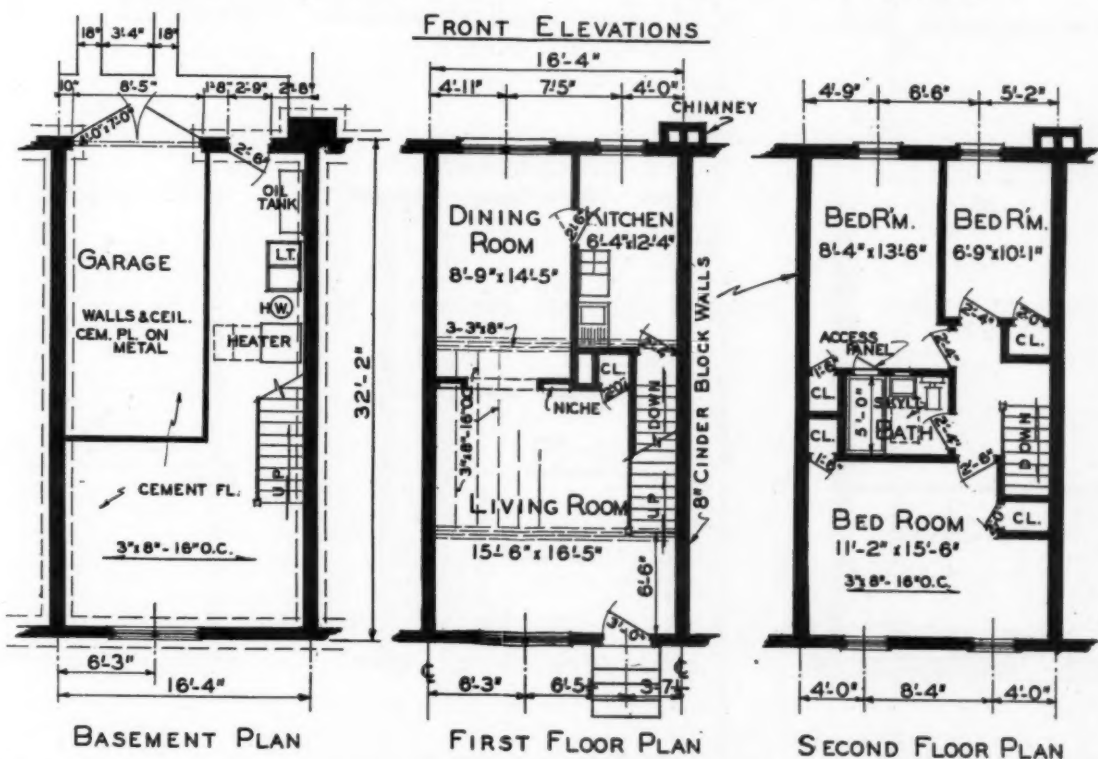
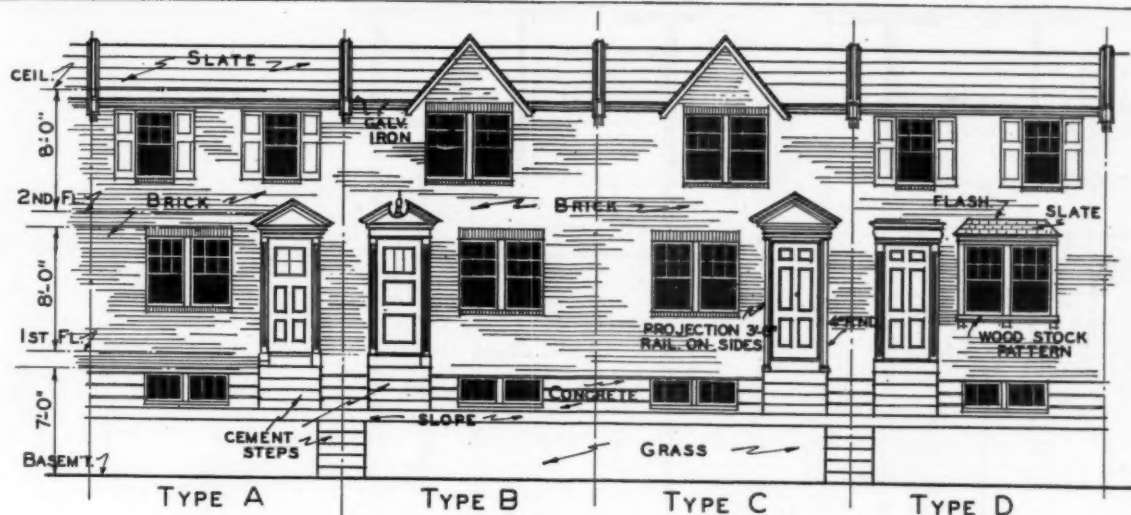
IN Philadelphia, private builders are aggressively attempting to meet the pressing need for war housing by building large numbers of row houses, most of which are financed under FHA Title VI.

In this they have been receiving the co-operation of the regional FHA office headed by Director Leo A. Kirk. This office has been encouraging the private builders to build more rental housing and has approved a number of standard row house floor plans which are detailed on the next three pages.

The principal problem faced by private builders in Philadelphia is the \$4,000 mortgage limitation under Title VI. These builders operate in an area of high land costs and sharply rising labor rates. In order to build houses under the \$4,000 mortgage ceiling, they are forced to construct extremely small row house units and practice every conceivable economy. Yet there is a limit beyond which they cannot go and continue either to sell or rent, because Philadelphians have been long educated to certain standards which cannot be changed overnight. *(Continued to page 50)*

A. P. ORLEANS sold 180 houses in three weeks on lease-option plan, \$250 down. Job started in February. Builders see row house as practical answer to the nation's low-cost war home problem.

FIRST SECTION of Orleans Title VI row houses nearing completion in April. Plans are below.



6-Room Row House—
Each Unit 16'-2" x 32'-4"

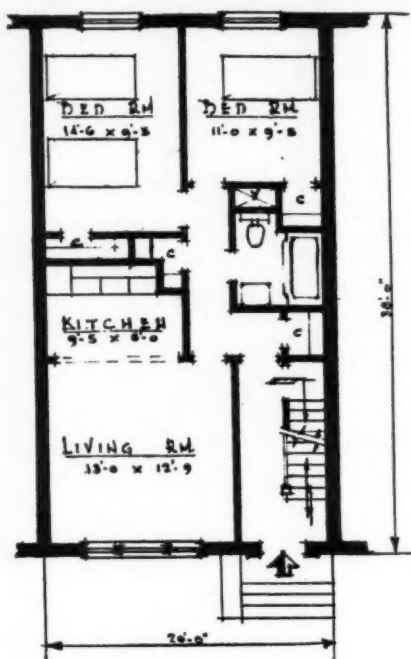
GARAGE AND REAR ENTRANCE in basement, chimney at rear. There are 3 bedrooms upstairs, bathroom with skylight. Roof is insulated, cold air returns vent into basement. These are standard plans used in 225-home Orleans Title VI job shown.



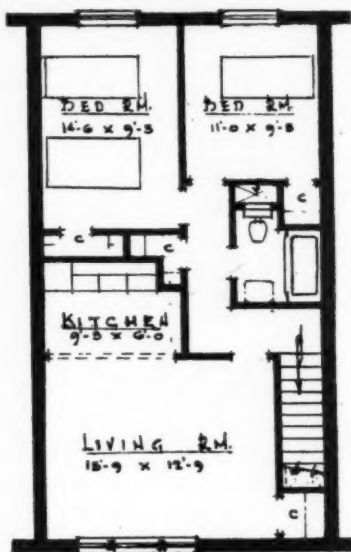
HIGH WAGES and construction costs force Philadelphia builders to keep down unit size to function under FHA Title VI mortgage maximum of \$4,000.

Despite these difficulties, a number of firms have been extremely active under Title VI. Outstanding among these is the Orleans organization, which secured a Title VI commitment on its 225-home Valley Park job January 15. Work started early in February and was rushed at top speed for the early spring market. At the model home opening late in March, more than 4,000 people turned out and advance sales of more than 180 houses were made in the three-week period following.

A large number of the Valley Park houses are being sold on the Title VI lease-option plan, with a down payment of \$250. The typical row house unit is only 16'-4" wide by 32'-2" long, into which space is compressed a living room, dining room, kitchen, three bedrooms, bath and a garage



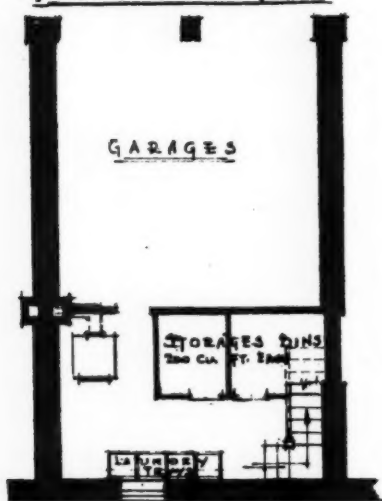
• FIRST FLOOR PLAN •



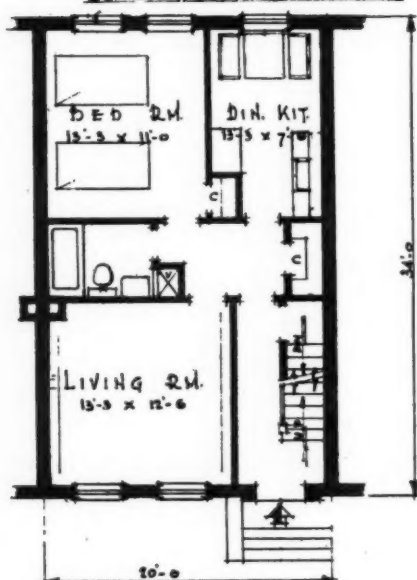
• SECOND FLOOR PLAN •



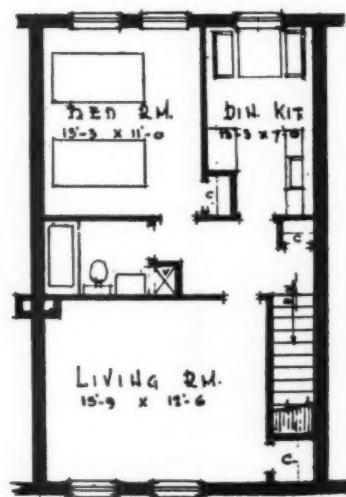
• FRONT ELEVATION •



• BASEMENT PLAN •

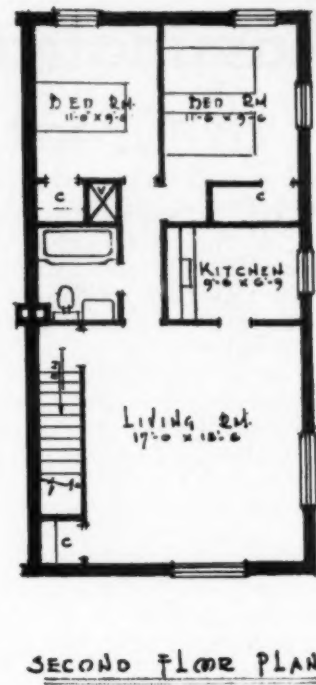
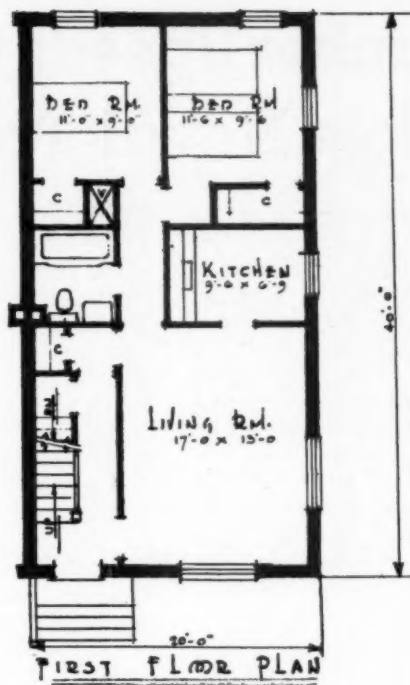
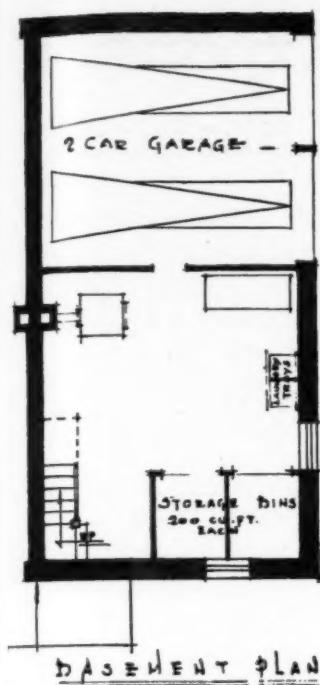


• FIRST FLOOR PLAN •



• SECOND FLOOR PLAN •

NEWLY APPROVED Title VI Philadelphia row house plans intended for rental. Upper group provides two 4-room apartments in 20' x 38' area. Lower plan suggests 1-bedroom layouts with 20' x 34' plan.



ECONOMY FLOOR PLANS approved by FHA and accepted by Philadelphia Home Builders' Association for standard types of rental houses. All three types shown have standard 20' front, with depth ranging from 33 to 40. Garage, storage space are provided in basement.

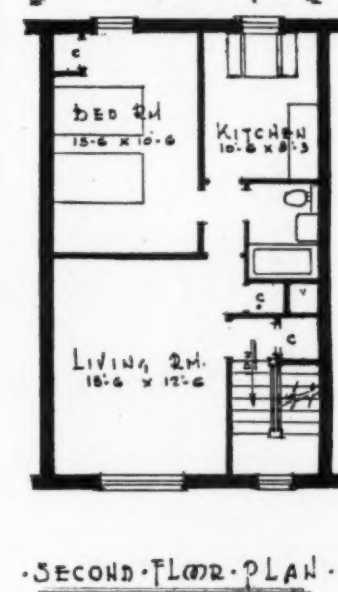
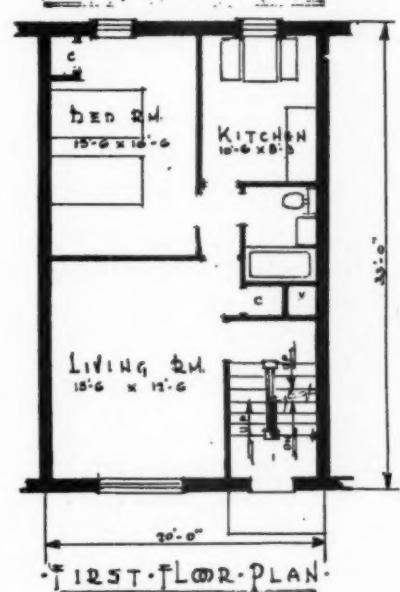
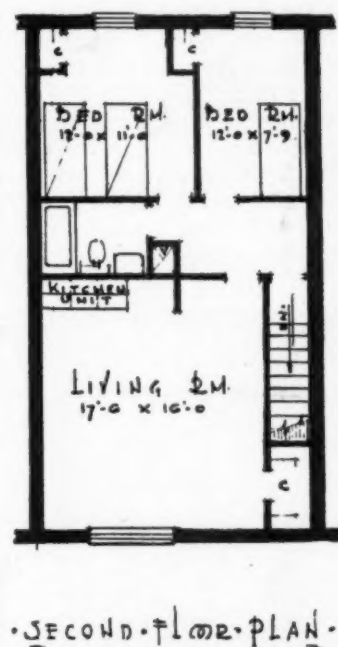
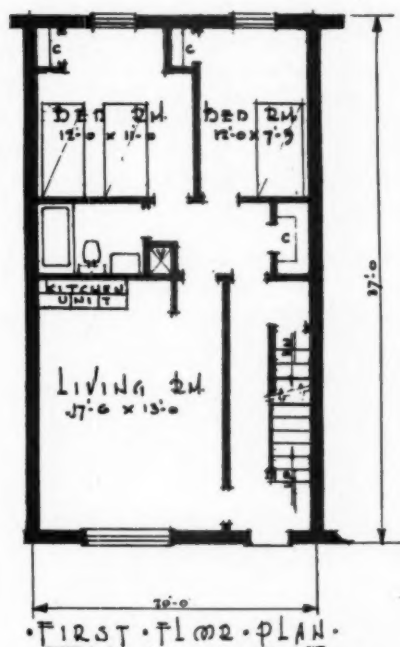
and recreation room in basement. Philadelphia builders through years of experience have become expert at getting a maximum amount of living area out of a small cubage.

Alfred P. Orleans, in addition to being one of the city's most successful builders, is treasurer of the Home Builders' Association of Philadelphia and Suburbs. Last year his organization built and sold 750 houses. At the recent convention of the National Home Builders' Association in Philadelphia, Orleans was one of the hosts and conducted the out-of-town builders through the Valley Park job, which was at that time at its most interesting stage. The accompanying photographs were taken at that time.

Orleans employs numerous cost-reducing methods. In the first place, the basic 16'-4" wide plan makes possible the use of stock size 3 x 8 joists and rafters on 16" centers. There is little of expensive framing involved, interior partitions use 2 x 3 studs, and cold air returns are vented into the basement which acts as a plenum chamber. This latter practice has been recently approved by FHA in the Philadelphia area, and by eliminating metal cold-air return ducts saves considerable metal as well as cost.

In building row houses the Orleans organization constructs several full streets at a time, making the most of

(Continued to page 104)



Laminated Lumber Speeds Huge Expansion at Great Lakes Naval Training Station

THE enormous expansion now in progress at the U. S. Naval Training Station at Great Lakes, Illinois, is notable in many ways. Size alone would make this construction job worthy of special mention. The speed with which the work is advancing, the excellent cooperation of the workmen, both civilian and Navy, the almost miraculous timing of the diverse, but coordinated operations—these are merely a few of the factors that are combining to make the bigger and better Naval Station an achievement of pride to every real American.

Work had started long before Pearl Harbor. The original plans envisioned the world's largest naval training station. Then, when the war broke, with the need for conservation of metals, innumerable technical details had to be altered, the general tempo was greatly accelerated and many of the plans underwent radical overnight changes. Yet, with all these difficulties, under the competent supervision of Navy engineers, progress of construction is well ahead of schedule.

Naturally, for military reasons, much of the story cannot be told now. There still remain, though, enough interesting features to fill a sizable volume. To architects, lumber men, builders and those concerned with everyday construction problems, undoubtedly the outstanding point of interest in the Great Lakes project is how lumber came back to its rightful place of importance. Here, modern science has achieved miracles in new and varied uses for mankind's oldest building medium.

One of the most interesting instances of wood replacing

metal is found in the arches used in the eight drill halls. These arches cover a span of 115 feet and reach a height of 42 feet at the crown. They are of glued laminated construction and fabricated from No. 1 dense kiln dried southern yellow pine. In cross section the arches are eight inches wide and 27 inches thick. Each section is made up of 42 laminations joined with a water resistant casein glue. It is estimated that between 25 and 30 tons of this special adhesive will be used in making all the arches required for the new Naval buildings.

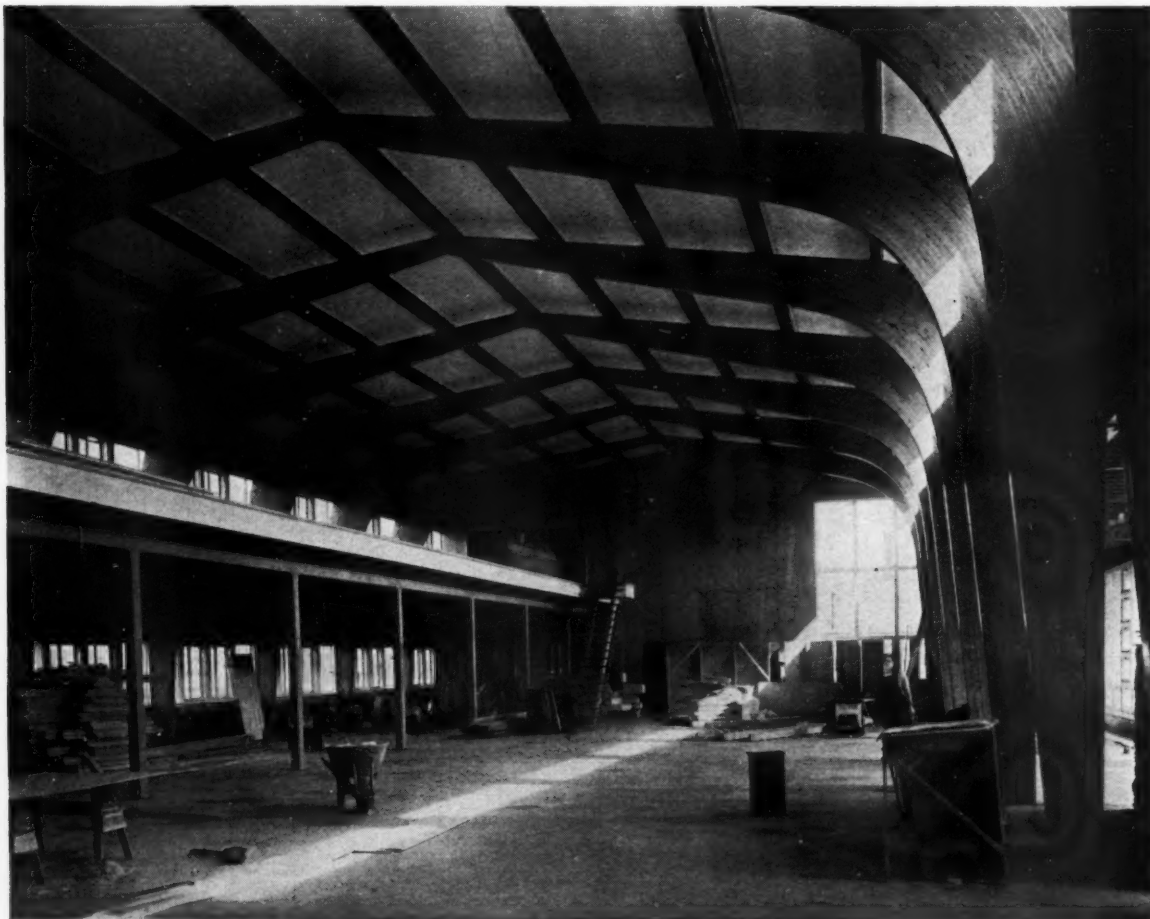
The arches were made in two pieces, each 80 feet long. Sixteen foot boards were used, scarfed at the ends and pre-glued to an eighty foot length. They were fabricated in south Chicago, and their transportation to Great Lakes presented many tricky problems. The trailer-trucks carrying the arches required two lanes on the highway and had to be routed to avoid railroad underpasses and heavy traffic. The Illinois State Highway Commission gave much helpful cooperation in this difficult task.

These arches were engineered for the following loads:

25	lbs.	per	sq.	ft.	of	snow.
15	"	"	"	"	"	dead load.
20	"	"	"	"	"	wind load.
10	"	"	"	"	"	ice and sleet.

This type of laminated arch construction not only saves many tons of steel, but lends itself to speedy erection and provides immense strength with an absolutely clear ceiling without any tie rods or braces.

A reasonable estimate of the lumber delivered to Great



INTERIOR of new Hostess House now nearing completion. Photographs: Official U. S. Navy.

Lakes since the expansion program started would be between 75 and 80 million feet. This sizable quantity of lumber was used to construct 240 buildings, consisting of barracks, subsistence buildings, ward buildings, recreation buildings, main gate recreation buildings, drill halls, and service school buildings.

In addition to these buildings there were a large number of miscellaneous buildings such as a rifle range, swimming pool, administration buildings, trade schools, dispensary buildings, storehouses, officers and non-com houses and garages.

From strictly a lumber standpoint probably the outstanding feature is the high quality specified by the Navy Bureau of Yards and Docks. In this regard the new buildings at the Great Lakes Naval Training Station are far superior to the average military cantonment. All dimension lumber is No. 1 common yellow pine or fir. Sheathing for floors, walls and roofs is No. 2 common yellow pine. 1 x 4 finished floors are of clear grade yellow pine or clear vertical grain kiln dried Douglas fir. Where structural requirements necessitate, timbers are all select grades that provide 1600 lbs. fibre stress.

It was the policy of the Public Works Division of the Navy to be certain at all times that lumber would be available for delivery within 24 hours from the time it was ordered by the contractor. Though lumber delivered by truck from Chicago stock naturally ran a little higher in price than had it been shipped from the mills, the Navy Officer in charge recognized the importance of synchronizing lumber deliveries with the contractors requirements to enable the speedy construction that was of primary consideration. As a result of this foresight there were no delays, or work stoppages, due to some necessary delivery being delayed in transit from the mill. Rehandling of the lumber was held to a minimum, too, since trucks

delivered their loads directly to the building operation where the lumber was to be used. This plan also enabled the use of drier lumber and permitted regrading to eliminate the customary 5% off-grade which is allowed on shipments from the mills.

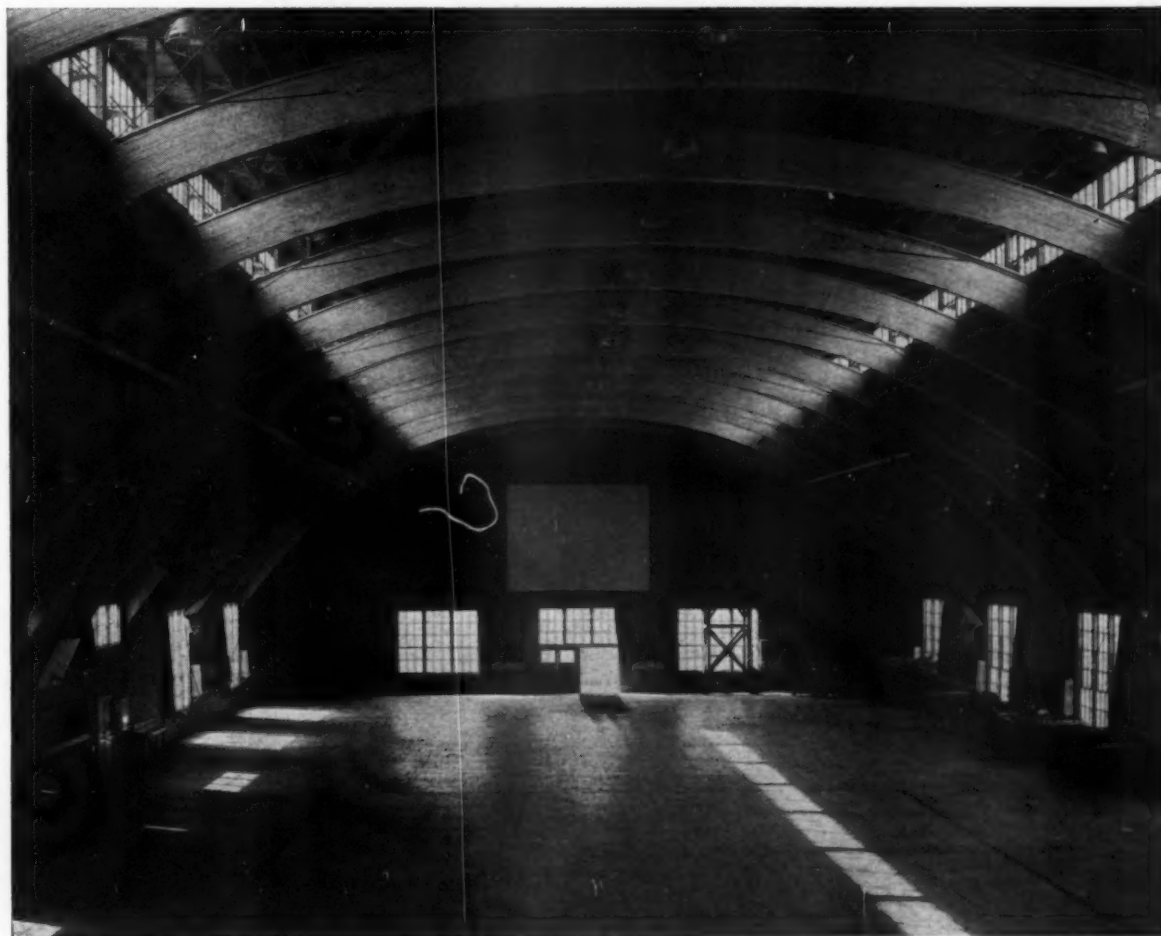
The contractors appreciated this policy because they were always sure of having the required lumber on hand and were able to determine the exact number of carpenters and laborers that would be needed so that they could hire the men well in advance of the start of work.

The all-around efficiency of the supervising Navy authorities and many contractors is reflected in the speed with which the various camps were completed. For example, Camp Paul Jones contains 32 barracks. The order for this lumber, approximately 2,200,000 feet, was placed by the contractor on December 12, 1941. Delivery of the timber for the sills began on December 15 and all of the framing lumber for the entire 32 barracks had been completely delivered to the job by December 31. Thus only 16 days were required to complete the delivery. To achieve this the contractor worked three shifts of eight hours each, seven days a week, including Christmas. Lumber deliveries continued uninterruptedly day and night and all day Sundays. The distance between Great Lakes and the point of origin of the lumber was about 40 miles and each truck made two deliveries a day carrying an average of 7,000 board feet per load.

The 55 barracks in Camp Dewey were begun on January 1, 1942 and were framed and closed in 40 days.

In addition to the huge quantities of lumber used in the 174 barracks comprising the several camps constructed in the vast Great Lakes expansion an imposing list of special items was needed. These figures include only the material used in the barracks. The hundreds of other

(Continued to page 104)



SMALLER drill hall in Camp Barry, used for movies, basketball and recreational activities.

Need Two-Bedroom War Houses All Look Alike?



ALTHOUGH quite different in type, the four house designs illustrated on these pages have a number of things in common, the most important of which is the fact that all could be built within defense housing cost limitations in most localities. Each has two bedrooms, three have garages. Arrangements are compact, economical, and plans are straightforward; but they are all different in appearance and do not have the usual drab "war housing" monotony.

Of course, the important job is to rush needed residential building to earliest possible completion but, where it will be permanent, some variation should be attempted if costs in time and materials are not increased. Perhaps builders will find some ideas here that can be used on local projects.

For instance, the two-story house at the left built in Shaler Park, near Pittsburgh, under an A-7 priority order saves the cost of a garage by using part of the basement for car storage. This can frequently be done on sites sloping to the rear as in this case. Plumbing is economically grouped; convenient plan has good circulation.

The cottage at the bottom of this page, with plan and details opposite, would at first glance seem to be out of the picture for the duration. But with

ONE of the units in a defense project near Pittsburgh, the design at the left offers five rooms, porch and basement garage compactly arranged on a sloping site. Plans below.



WITH an exterior of log cabin siding, open porch and stone chimney, this five-room basementless house fits into its rustic site near Chicago. The garage and porch might be added later if small space heater and fireplace are adequate. The plans are opposite.

THE Russell Stapp Co. of South Bend, Ind., has been building small houses, such as the two at the right, for some time. They are compact, well planned, and of pleasing appearance. The plan for the upper one, as shown here, provides access to the attic space.

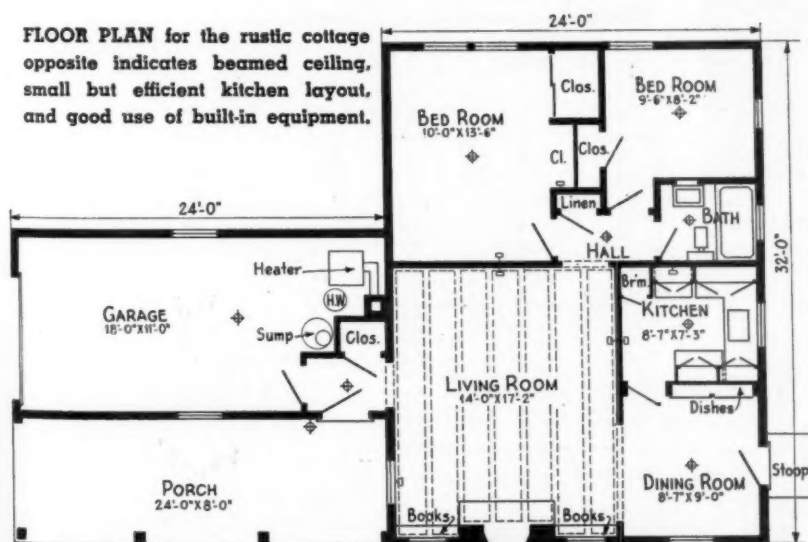


many war plants going up in the "wilderness" in sections which were formerly vacation lands, it is possible that dealer stocks of such items as log siding might be used on jobs for worker housing and later sold as summer homes. The one shown here was built in Illinois by the Beatty Lumber Company, near Chicago; the garage space might be used entirely as a utility room, and the fireplace added later.

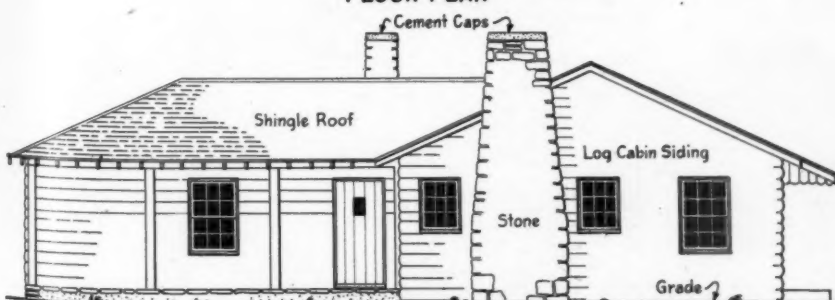
The two little attractive houses at the right were built by the Russell Stapp Company, South Bend, Ind. The upper one has usable attic space. The garage can be added later to the lower one. Also some of the detail could be left off for the present.



FLOOR PLAN for the rustic cottage opposite indicates beamed ceiling, small but efficient kitchen layout, and good use of built-in equipment.



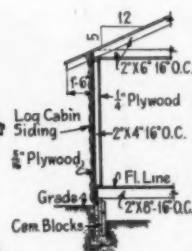
FLOOR PLAN



FRONT ELEVATION



IN THE ABOVE plan, garage and connecting passageway are not included as this portion can be omitted for the present. (See view immediately above.)



WALL SECTION

THE elevation and section of the design on the opposite page show how the garage and porch wing tie into the main section of the cottage which is built without basement, studs faced on both sides with plywood and covered with log siding outside.

Build Small Now—Enlarge Later

How to Provide Today's Essential Wartime Shelter, with "Extensibility" Planned for Desirable Future Additions

PLANNING a small home so that it can be enlarged later on is good sense and good business today. Moreover, it is patriotic. It furnishes needed shelter and industrial housing with minimum use of critical list materials. *American Builder* has proposed the "extensible" house to meet war building conditions—a house that is planned for future enlargements or is planned big yet with some rooms left unfinished at first and some equipment definitely planned for, but not to be installed until some later time. It is gratifying to see how many in the building industry have taken up this idea, adapting it in many ways to their own problems and conditions.

A new collection of designs for "the smaller home" has been developed by the architects of the National Plan Service, Inc., and three of these are illustrated here because they exemplify this type of forward-looking home

planning in such a practical way. To identify them these plans have been given the names Neal, Nolan and Nelson. Each is illustrated with rendered perspective of the starting unit; dimensioned floor plans of the original layout; the proposed future additions on another floor plan, the additions being in heavy line; and a pen and ink sketch of the final exterior after the planned-for additions have been made.

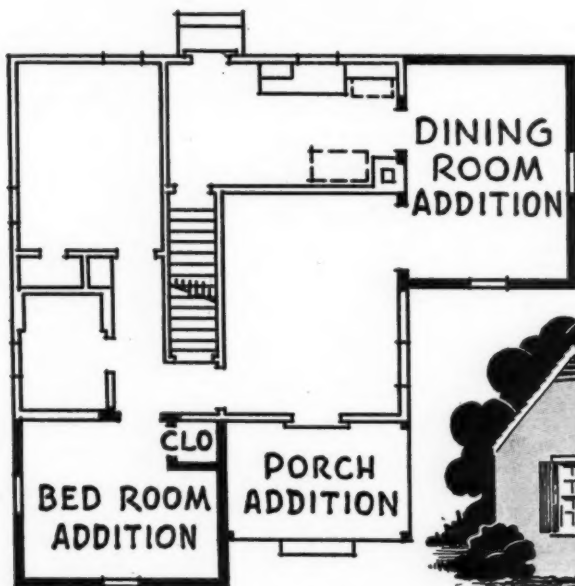
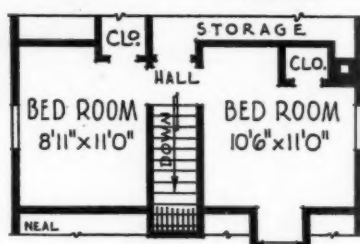
In presenting these designs the architects write, "The growing or extensible type of small home for which there is an increasing demand is especially planned for the small family of today. Provision for future expanding need and income is considered, enabling the home owner at a minimum expense to expand or add future units as they may be required. The original unit is complete in itself or in combination with other units.



THREE-room starting unit, arranged as shown at right, is planned for future addition of bedroom, dining room and porch as below.



ORIGINAL structure measures 24' by 22' and with full excavated basement, contains 11,740 cu. ft. Two nice bedrooms can be finished off upstairs later.



SKETCH below shows attractive appearance of this house when built out with the two additions indicated by the heavy lines on floor plan, left.

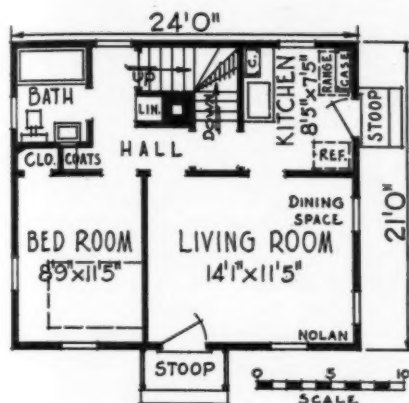


"The primary and helpful function of the 'home that grows' from an investment standpoint is to obtain the ultimate in architectural and sound construction values without the financial strain of over-commitment in initial cost. It is easy to build and own any of these small homes."

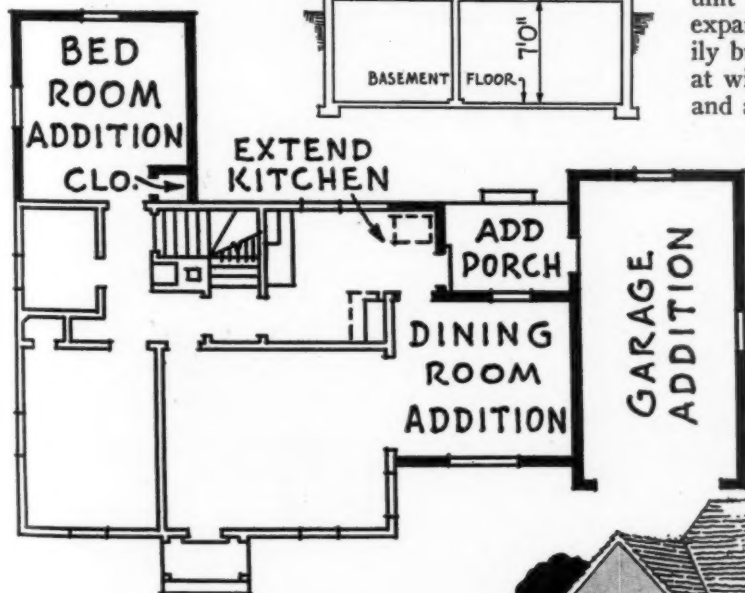
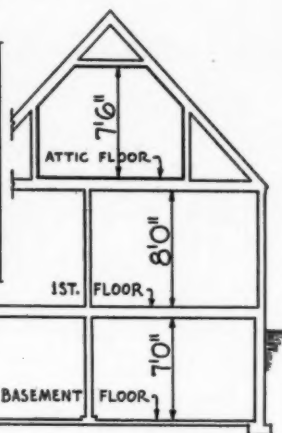
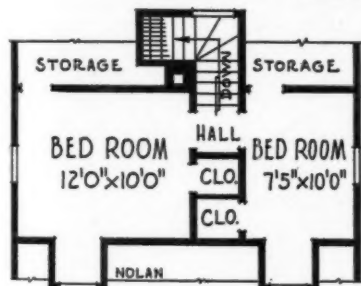
Referring to the first of these designs, notice the front bedroom addition is made by utilizing the original window opening for the doorway from the hall. Likewise, for the dining room addition one of the living room openings becomes a door and the old outside kitchen door opening serves as a doorway between the kitchen and the new dining room. By planning the original unit in this way,

it is simple to make these additions because costly alterations are not involved. There would be no excavation under either of these additions, and that being so, careful provision should be made for building the floors extra warm and tight. The first step in this particular program would probably be the finishing off of the two upstairs bedrooms. Note that the floor plan, as well as the sketch of the finished house, shows a dormer in the bedroom to the right. This dormer does not show in the original perspective, but it might well be included in the original contract.

With reference to the second design illustrated, the architect points out that "installment building," when



THREE-room starting unit 24' by 21' with full excavated basement contains 11,000 cu. ft. Two additional bedrooms can be finished upstairs (front dormers added).



SKETCH to right shows rear view of enlarged house with bedroom wing and added dining room, porch and garage section indicated by heavy lines on floor plan as shown directly above.



STARTING unit is really a low cost war home of three rooms and bath. Make enlargements in three steps later as may be desired.

supported by a plan that is designed with contemplation of future enlargements, is a sound and practical investment. The "Nolan" offers a complete three-room living unit which can be erected now at a very low cost and expanded piece-meal to the extent permitted by the family budget. A future seven-room home is finally arrived at with the addition of a bedroom wing at the left rear and a dining room and garage addition to the right, the garage directly opening off the street.

In this design again, notice how the original window openings serve as doorways when the enlargements are made. If the second floor bed-





FOUR-room starting units measures 26' by 25½' and cubes 11,200' with full excavated basement. Below, and to right, are shown planned extensions providing new larger living room, enlarged front bedroom and ample porch.



rooms are to be finished immediately, the two front dormers—not shown in the original sketch—should be included and they would really add considerably to the attractive appearance of this little home.

The third of these designs begins life as a compact four-room and bath unit, 26' by 25½', in ground dimensions. Later a big living room is to be added to the right, the front bedroom to be extended in size and the porch added, making this ultimately a good example of the low, wide, ranch type house. A study of the plans will show how it was designed for these future enlargements which can be made any time the budget increases or the family grows. However, in its original starting form it furnishes ample comfort for a family of four persons.

The floor plan as drawn shows a cellar stairway down to an excavated basement. However, this would be a good plan for a basementless house with a utility room of about the same size as the stairway but placed on the opposite side of the kitchen so that the kitchen itself would have the advantage of windows on two sides.

Study these extensible house ideas to see how nicely they work in with the government's present plan of promoting low price (under \$6,000) homes for war workers. These houses are built fast, sell fast, rent fast. They are good investments and what the nation needs today in a great many localities.

Now, more than ever, it seems wise to plan for an expanding future by putting a small house on a fairly large building site. This will provide space for a Victory garden now, and later on the planned-for additions to carry out the extensible house idea can be made properly and without crowding.



HARRY J. DURBIN.
Detroit, newly elected "flying" president, National Home Builders Assn.

Builders Meet In Philadelphia, Petition Blandford For FHA Changes To Aid Private War Home Building

PPRIVATE home builders of the country are thoroughly aroused by the long delay that has taken place in obtaining vitally needed amendments to Title VI of the National Housing Act. The need for liberalizing amendments was the typical topic of discussion at the recent Philadelphia meeting of the National Home Builders Association which was attended by prominent builders from more than a dozen cities with active associations.

Meeting in executive session the home builders adopted a resolution urging John B. Blandford, Jr., to move immediately to get the Title VI amendments before Congress.

"The government has cited defense housing as one of the most important parts of the general defense program," the resolution stated. "It expects the private building industry to produce the major portion—

"It cannot do this job without proper and adequate tools.

"The principal tool which the builders need is a liberalized Title VI.

"These amendments have been reposing in the Budget Bureau for many weeks.

"The N.H.B.A. requests Mr. Blandford to move immediately, not only to get these amendments out of the Budget Bureau, but to press Congress for immediate passage.

"If the Administrator fails to act in this matter, the N.H.B.A. shall advise builders of the nation to forget defense housing, until the National Housing Agencies themselves wake up to the fact that we are at war, and regulate their actions accordingly."

The N.H.B.A. was a busy two-day affair ending in a formal banquet given by the Home Builders Association of Philadelphia, attended by prominent builders, government officials and representatives of the Federal Housing Administration including Leo A. Kirk, the regional director.

After electing Harry J. Durbin, prominent Detroit builder, as president, Stephen E. Kovach, Jr., of Pittsburgh, executive vice president and W. J. Guinan, of Detroit, executive secretary, the builders showed their interest in "doing something" to improve their situation by raising \$4,000 by popular subscription from the floor as a start towards a "Washington fund."

The association also voted to join the National Homes Foundation of Washington and the United States Chamber of Commerce and to send representatives to the meetings of these associations in the hope that cooperative steps to present a united front in contacts with U.S. officials might be secured.

The popular new HBA president, H. J. Durbin, has volunteered to use his own private plane to fly anywhere in the country at the request

(Continued to page 99)



NEWLY ELECTED officers at Philadelphia HBA meeting: H. A. Schulenberg, St. Louis, treasurer, left; Harry J. Durbin, Detroit, president, center; W. J. Guinan, Detroit, executive secretary, right.



LUCKY 13—Largest delegation at the HBA meeting was this group of 13 representing the Rochester Home Builders Association.



"Victory Home" Inspires Cleveland's Home and Flower Show Visitors

DESIGNED to meet the demands of today's "War Market" for thousands of small, private homes in those areas where war production is heavily concentrated, the Ohio Brick and Tile Institute's all-brick "Victory Home" was one of the big hits of the recent annual Cleveland (O.) Home and Flower Show. Furthermore, it was the first large-scale public demonstration of the advantages and adaptability of clay products in the construction of homes that fully conform to government requirements.

Cooperation of Cleveland building supply dealers, builders and the trade with the Ohio Brick and Tile Institute, representing 22 brick plants, made this timely Institute-planned project a reality. Local labor unions furnished the labor; the accessory materials were supplied by Cleveland dealers; and the Institute provided the brick. The construction superintendence was handled by the Benton Building Company. Advance planning and follow through were the responsibility of R. Hunter Cochran, Institute secretary, who worked closely with Show Manager Ralph Stoddard.

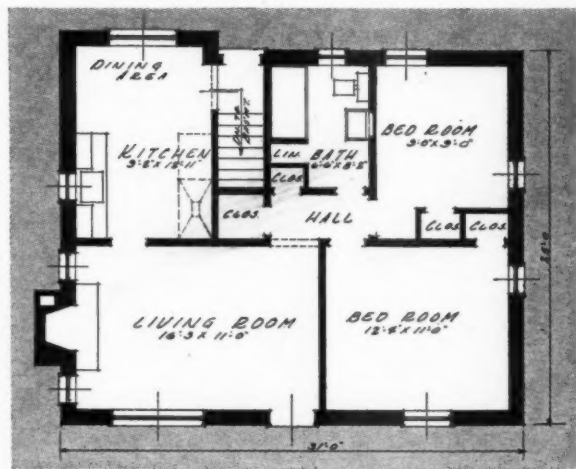
Five days after it was staked out in the Cleveland Public Auditorium, the "Victory Home" was complete, even to plaster and landscaping.

By actual count, 64,440 persons (not counting the youngsters!) inspected the "Victory Home" during the one week show. Attendants were on hand to answer questions regarding construction features and duplication of the home in the Benton Company's subdivision, or on any lot in the Cleveland area. The constant flow of visitors and the questions they asked are significant for the building industry everywhere, because they reflect a national trend.

For instance, the attention accorded the "Victory Home" definitely established (1) the existence of a fast-growing market for the small home, and (2) that

home ownership still is a vital consideration in the American pattern of living, a pattern which specifically includes defense workers. Most of the visitors were amazed they could buy "so much brick house" for so little money. Conversation after conversation showed a desire for competent help in planning; not only new homes, but the remodeling of old ones. And finally, thousands of questions indicated the widespread confusion existing as to who can and who can't build, how much and where? However, authoritative clarification from Washington on these points is serving as a "go" signal in defense housing priority localities.

As proof! The three orders signed "on the spot" for duplicates of the "Victory Home" . . . the 5 Victory Homes the Benton Company already has under construction, with more ready to go immediately adjacent



PLAN of "Victory Home" shows 4 rooms and bath well arranged.

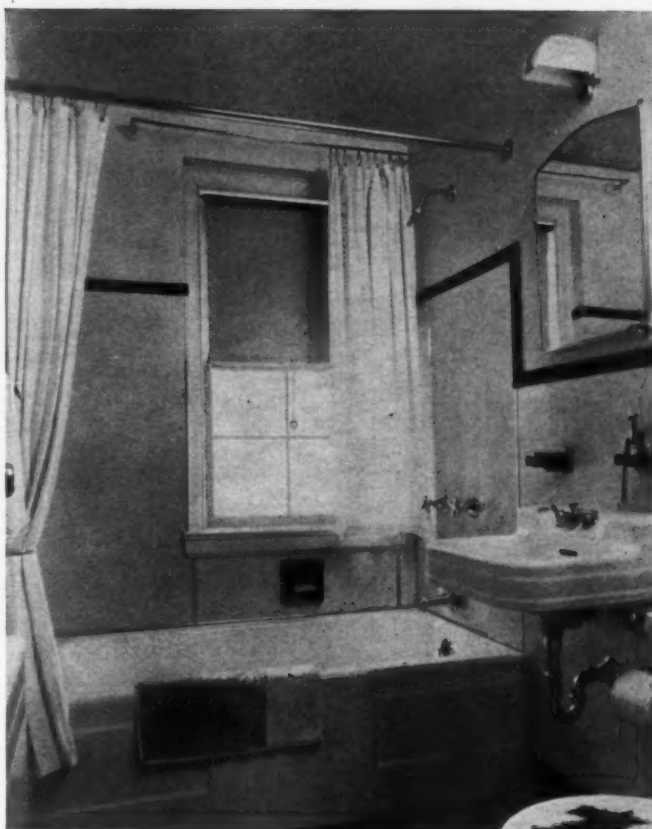
to Cleveland's rapidly-expanding defense operations . . . the army of known prospects which the Cleveland Show produced for future cultivation in northern Ohio . . . the appearance of sizeable amounts of private capital to provide permanent homes in local defense areas.

Construction cost of \$5250 calls for a "Victory Home" of living room, two bedrooms, entrance hall, complete bath with standard-size fixtures, combined kitchen and dinette and full basement. If desired the floor plan can be easily revised to include a dining room. Provision also is made, by raising the roof, for the addition of two large second floor rooms later.

Special attention was paid to cross ventilation and light, sufficient wall space for variation of furniture, and a work-saving kitchen. Adequate closet space is another important feature.

Cavity wall type of construction is featured in these "Victory Homes," and a cut-away wall section attracted as much interest as any of the living features of the house, which was attractively set off by a garden grown with \$25,000 worth of blooming flowers. Descriptive literature was handed all visitors. The "Victory Home" can be adapted to any locality and additional information can be had by writing the Ohio Brick and Tile Institute, Renkert Building, Canton, Ohio.

Over and above everything else that the "Victory Home" accomplished in Cleveland, it has made builders and buyers throughout northern Ohio more keenly aware than ever before that brick can be used for building a home that not only meets defense requirements, but also is attractive and complete, large enough to provide pleasant living for a family now, and afford practical possibilities for future enlargement.



BATH ROOM finished in Marlite by Marsh Wall Products, Inc., attracted favorable attention in the Cleveland Victory Home.



FURNISHINGS by Bing Furniture Company were in keeping with current popular taste in the Cleveland Area.



LIVABLE, well laid out, economical, and looks bigger than it actually is. Alfred H. Ryder, designer.



DETAIL of front porch and brick garage wing. House at Baldwin, Long Island.



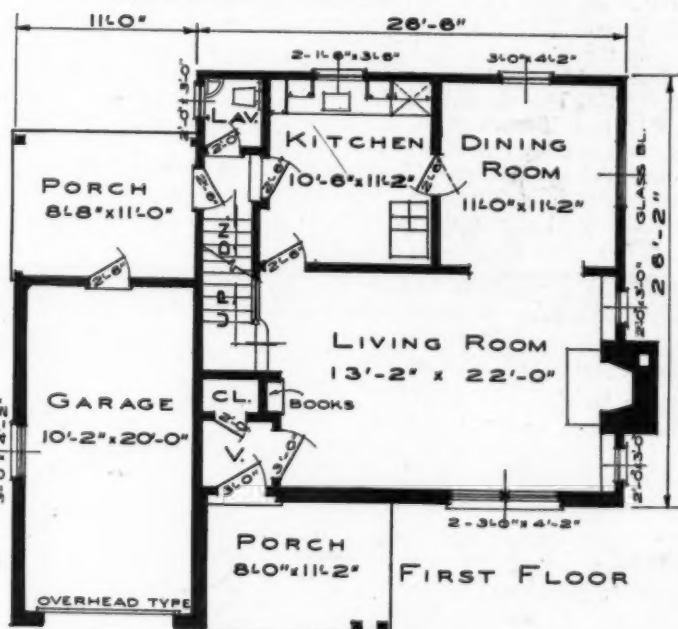
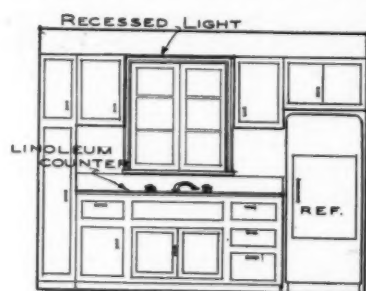
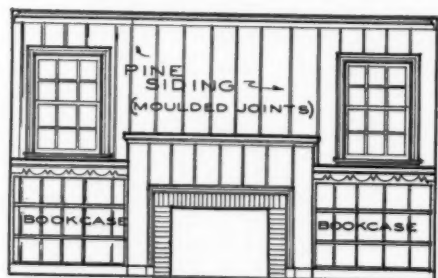
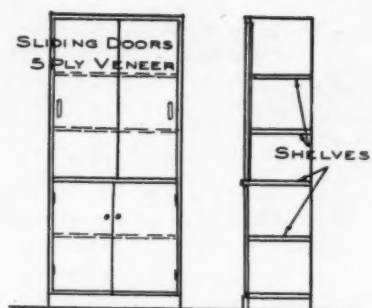
For War or Peace

26'-6" x 26'-2" floor plan provides 6 livable rooms at low cost. Attached garage and porch contribute to appearance

THIS war or peace house hits the mark by packing a surprising amount of livable space into the 26' 6" x 26' 2" plan. It has war-time efficiency combined with peace-time architectural appeal. And don't forget that houses still have to be sold.

The brick veneer and wood shingle exterior with an 8" overhang at front is attractive, and the house looks much bigger than it is due to the attached garage and front porch. There's also a nice little back porch.

Attractive features include the downstairs lavatory, pine-paneled fireplace wall in living room, Stanley overhead garage doors, U. S. G. insulating lath, Chrysler Airtemp oil burner, 13' 2" x 22' living room with large opening to dining room. Bedrooms have ample closets and cross ventilation. It was built at Baldwin, Long Island, by the Frederic H. Ryder Corp., from plans by Alfred H. Ryder.



Detailed Plan—6-Room Defense Type Home

ALFRED H. RYDER designed this unusually economical little house with brick and shingle exterior at Baldwin, L. I. There are a downstairs lavatory, porches front and rear and a pine paneled fireplace detail. A lot of house on a 26' 6" x 26' 2" foundation.

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use coupon on this page for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

NEW TOOLS, MATERIALS AND EQUIPMENT

AB869 "Glued, Laminated Wood Beams, Arches, Roof Trusses" is a 4-page illustrated data sheet from the Casein Co. of America, 350 Madison Ave., New York City, giving very timely information in view of the present shortage of construction metals. A companion piece, "The Use of Glue in Building Construction and Remodeling," is a 22-page handbook summarizing present knowledge in this field pertaining to carpentry and construction.

AB870 "Hardwood Portabilt Cabinetry" is an impressive 16-page and covers brochure from Mutschler Brothers Co., Nappanee, Ind. It outlines the theory of modern kitchen planning and details the extensive line of Portabilt sink cabinets, base cabinets and wall storage cabinets.

AB871 Coleman oil floor furnaces are effectively presented in a new 8-page catalog "The Ideal Heating Unit for Small Modern Homes." A companion piece presents the Coleman gas floor furnace, a 24-page brochure in color.

AB872 "Cuts Everything Including Your Costs" is the challenging title of a new 16-page handbook catalog on the Monarch Uni-Point Radial Saw, developed by the American Saw Mill Machinery Co., Hackettstown, N.J. Based on nearly a half-century of experience manufacturing all types of woodworking machinery, this new Monarch Uni-Point is a radial saw entirely different in engineering principles. Large scale photographs

show exactly how this equipment is built and the variety of work it will do. A full line of accessories, illustrated, adapts this machine to many uses.

AB873 "Heating and Insulation Requirements for Defense Housing" is an 8-page illustrated data sheet from the Owens-Corning Fiberglas Corp., Toledo, O. It discusses the heating and insulation requirements for defense housing, explains how to calculate heat losses for dwellings and shows how to use the company's product, Fiberglas, which is distributed by United States Gypsum Co. under the name Red Top Insulating Wool.

AB874 "Painting Concrete, Stucco and Masonry" is a meaty bulletin of 8 pages from Medusa Products Co., Div. of Medusa Portland Cement Co., Midland Bldg., Cleveland, O. Exterior and interior painting of all masonry surfaces with Medusa Portland Cement paint is thoroughly demonstrated.

AB875 Lignophol, the one application preservative floor finish for floors, trim, doors, etc., is presented in a 4-page data sheet from L. Sonneborn Sons, Inc., 88 Lexington Ave., New York City. Directed specifically at school executives and to school, gymnasium and camp builders this bulletin illustrates in natural colors the effect of Lignophol on maple, birch, oak and pine flooring.

AB876 "How to Make Rooms Color Perfect with the New Nairn Color Correlation Plan" is the title

of a new de luxe 24-page brochure in full color from Congoleum-Nairn, Inc., Kearny, N.J. It outlines and illustrates the four successive steps in arriving at a successful color scheme for any room.

AB877 "Color Keys to Decoration" is a new manual on decoration by United States Gypsum Co., Chicago. It is a 36-page book in full color presenting 111 colorful room settings telling how to select colors for effective room decoration.

AB878 The old reliable diaphragm pump reaches new efficiency in the improved models announced by Construction Machinery Co., Waterloo, Ia. Nothing can take the place of the diaphragm in handling mud, sludge, seepage, sewage, etc.; and these improved 100% self-priming "Wonders" provide better service than heretofore available from this type of pump. Exclusive features are—Timken bearing construction, full finished roller chain drive (every link a roller bearing), cut tooth sprockets completely enclosed, improved type, long service "basket weave"



WONDER
improved diaphragm pump.

diaphragm, interusable suction, discharge and clean-out locations. Two sizes of Wonder diaphragms are offered: 3" Model FD-3, 3000 G.P.H. at 10 ft. suction lift and 4" Model FD-4, 6000 G.P.H. at 10 ft. lift.

AB879 "Western Pine Camera Views for Home Builders" is a deluxe pictorial portfolio of 20 pages prepared by the Western Pine Assn., Yeon Bldg., Portland, Ore. It illustrates many beautiful interiors, rich in suggestions for modernizing as well as new construction.

AB880 "New Woodwork in Tune With the Times by Curtis" is a looseleaf portfolio of 38 beautiful photographs of entrances, windows and interior case work selected from the Curtis line. On the reverse of each is an outline specification giving other pertinent information.

AB881 Precast concrete septic tanks are illustrated and described in a new 16-page bulletin from the Portland Cement Assn., 33 West Grand Ave., Chicago. How to manufacture and install these septic tanks is clearly shown. Approved methods for protecting the farm or country home water supply are also included.

AB882 Bulletin No. 65 from Frank Adam Electric Co., St. Louis, Mo., offers 20 pages of information on Busduct Distribution Systems for light and power in plants and shops.

CLIP AND MAIL TO CHICAGO

Readers Service Department,
American Builder,
105 W. Adams St., Chicago, Ill.

(May, 1942)

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers.....

Name.....

Street.....

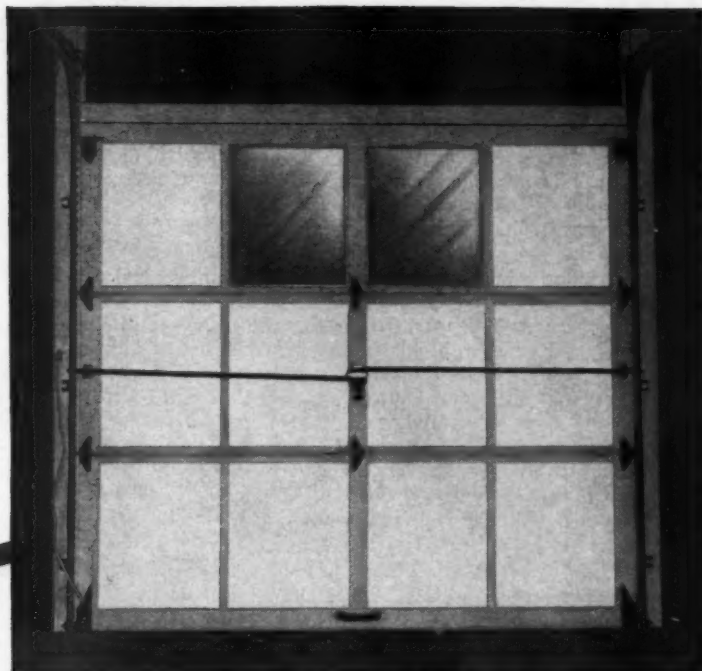
City..... State.....

OCCUPATION*.....

*Please note that occupation must be stated if full service is to be given

Built
FOR TODAY'S JOBS!
Priced
FOR TODAY'S NEEDS!

Ro-Way
Model "R" Door
OVERHEAD TYPE



Above is shown the Ro-Way Model "R" Overhead Type Door of 3-section type with 2 glass panels. This model is made in either 3 or 4 sections, and in only two sizes—8 ft. x 6 ft. 6 in., and 8 ft. by 7 ft.

For Small Home Garages, Defense Housing and Other Low-Cost Jobs

Price talks today. But quality and value are more *important* than ever. You can't afford to select a door that won't stand up in every day service. You can't afford to jeopardize your reputation or your profits by recommending a door that is skimpy at any point to get down to a price.

The Ro-Way Model "R" is everything you would ask of a Door if you were building a low-cost serviceable home of your own. It has the streamlined appearance you would like . . . It is a true Overhead Type Door that gives full drive-in clearance when opened . . . It has the Parkerized and Painted hardware you would demand . . . It has the extra support for the sheave wheel to insure sturdy service . . . It has the specially-designed friction-reducing track to give lasting ease of operation . . . It has double tread rollers with 7 ball bearings in each roller to give you truly gliding action . . . It has powerful Rowe-made extension springs with simple, quick adjustment feature that keeps the lifting power always up to par. Write for Special Folder.

ROWE MANUFACTURING COMPANY

744 Holton Street

Galesburg, Illinois, U. S. A.



2-Car Garage with Model "R" Ro-Way Doors.



The Ro-Way Model "R-4" Overhead Type Door installed in a single family residence type garage.

Write for Ro-Way Special Folder

Write for New Special Folder on the Ro-Way Model "R"—just the Overhead Type Door to meet today's demand for small home garages, defense housing and other low cost jobs.

ROWE MANUFACTURING CO.,
744 Holton St., Galesburg, Ill.

Gentlemen: Please send me Free Descriptive Folder and Prices on Ro-Way Overhead Type Doors.

Name

Address

City..... State.....

There's a Ro-Way for every Door way!

1942 Construction Estimates Again Boosted

Military, Naval, and Industrial Projects Far Outrank Other Categories

OFFICIAL government figures on this year's building program have again been increased from those released in February and presented in the *American Builder* of that month (page 59). In "Domestic Commerce" of April 9 S. Morris Livingston and Joseph H. Ehlers present the following:

The enormous volume of work to be done on military and naval facilities, together with the expansion of plants for war production and other projects essential to the war effort, will make 1942 the biggest year in the history of the construction industry.

In spite of a drastic curtailment of non-essential projects, total construction for continental United States in 1942 will be around 11.6 billion dollars, compared with 10.8 billion dollars in 1941.

NEW CONSTRUCTION ACTIVITY: ESTIMATES FOR CONTINENTAL UNITED STATES BY FUNCTION AND OWNERSHIP, 1940-42 (In millions of dollars)

	1940	1941	Forecast 1942
Total new construction.....	\$7,085	\$10,811	\$11,600
Total private.....	4,409	5,236	3,000
Residential building (nonfarm).....	2,323	2,675	1,300
Nonresidential building.....	973	1,191	450
Commercial.....	320	350	150
Industrial.....	440	600	200
All other.....	213	241	100
Farm.....	468	540	550
Public utility.....	645	830	700
Total public.....	2,676	5,575	8,600
Residential building.....	202	482	700
Nonresidential building.....	501	1,672	2,750
Commercial and industrial.....	149	1,312	2,500
All other.....	352	360	250
Military and naval.....	473	1,768	3,900
Highway.....	945	1,013	700
Other public works.....	555	640	550

Construction of cantonments, air fields, naval stations, and other military facilities will be close to 4 billion dollars this year—more than double the volume in 1941. Industrial and commercial buildings, mostly to expand our output of war goods, will take about 2.9 billion dollars, as against 2.3 billion last year.

Residential construction will be cut to about two-thirds of the 1941 level and will be concentrated in the critical areas, where priorities are available. Drastic curtailment of most other types of construction is expected, but the volume in these categories still will be substantial because of the essential nature of many projects.

Nonessential construction will decline during the year as projects already under way are completed and controls are made more effective. This will not, however, result in a corresponding reduction in total volume, because of the increase in military construction.

After recovering from the initial shock of the institution of priorities, along with actual and feared shortages of materials, residential contracts have shown a better-than-average trend over the last 3 months.

For the first two months of 1942 these contracts exceeded the 1941 volume by nearly 20 per cent, despite a low January total.

The principal explanation of this large volume lies in the urgency of the housing needs in some of the war production areas, thus forcing continuation of building at a time when it is normally slowed up by weather conditions. The greatest increases have been in the Chicago, Detroit, Kansas City, and Texas areas.

It is evident, however, that a large volume of residential building has been going on without benefit of priority. A rough calculation indicates that less than half of the houses started between November 1 and January 31 had a priority status. This does not necessarily imply that there was a large amount of building outside of critical areas or above a \$6,000 limit, since builders within critical areas have frequently found it unnecessary to get priorities in order to obtain necessary materials.

FHA mortgage insurance business not only reflects this trend but indicates a large increase in the participation of FHA in this

field. February applications on new homes show an amazing increase of 65 per cent over January. For the first 2 months of 1942, a total of 49,000 applications was received, or 46 per cent more than for the corresponding 1941 period. The liberalization in policy and procedure put into effect in January with regard to Title 6 loans was largely responsible for the increase.

About half of the 1941 single-family non-farm dwellings built last year were FHA insured. This was a substantial increase over 1940. Indicative of the increasing participation in the building of homes in the lower price bracket, the medium income of FHA new home buyers was \$2,264 in 1941, compared with \$2,381 in 1940 and \$2,716 in 1937.

The continuing demand for industrial plants has maintained a high level of nonresidential building despite declines in such structures as stores, commercial warehouses, public buildings, and buildings for educational and recreational activities. February data on contract awards indicate a high level for the month, with 1942 running 40 per cent ahead of the 2-month period of 1941.

In the public-works field, contracts for water-front developments and sewerage systems offset declines in highway and bridge construction, so that the net gain for public-works awards through February, according to F. W. Dodge reports, was 20 per cent over 1941.

Utility construction contracts reported by Dodge are running far ahead of 1941 for the year through February, despite declines in light and power projects and for railroad construction. This is due to increases in pipe-line, water-supply, and airport construction.

Total construction awards for the year through February are 30 per cent over the total for the 1941 period. The greatest increases are indicated for the Southeast, the Pittsburgh area, and southern Michigan.

FHA Title VI to Be Liberalized

Administration Bill Increases Mortgage Limit to \$5400.

THE GO-AHEAD signal to thousands of private home builders throughout the land will be given when Bill H. R. 6927 liberalizing Title VI of the National Housing Act is passed.

This bill was introduced April 14 by Congressman Steagall and referred to the Committee on Banking and Currency.

The five items of outstanding importance it provides are:

1. It increases the authorization for FHA defense housing mortgage insurance from \$300,000,000 to \$800,000,000—a \$500,000,000 increase.

2. It raises the ceiling on the size of mortgage that may be insured on a Title VI defense house from \$4,000 to \$5,400. This would amount to a 90 per cent loan on a \$6,000 house.

3. It extends the lending period on Title VI loans to 25 years, thus considerably reducing the monthly mortgage payments. On rental projects this is extremely important since it makes it easier for the builder-owner to function under the \$50 rent ceiling.

4. It provides, under Section 608, a new setup for large-scale rental housing projects to be built by limited dividend corporations. Loans may run up to \$5,000,000 and may cover 90 per cent of the estimated value of the completed project. Cost per room is limited to \$1,350.

5. It liberalizes the FHA remodeling setup for defense areas. The size of loans for remodeling that adds new living quarters is increased to \$5,000, and the lending period stretched to seven years.

All of these items will have a far-reaching effect on the operations of private builders. The first item is necessary if FHA is to continue to insure defense housing. The additional \$500,000,000 authorization will permit construction of 100,000 to 125,000 additional defense houses by private builders.

The second item raising the maximum mortgage to \$5,400 means that builders in the northern part of the U. S. will be able to function under Title VI because it will permit them to

(Continued to page 68)

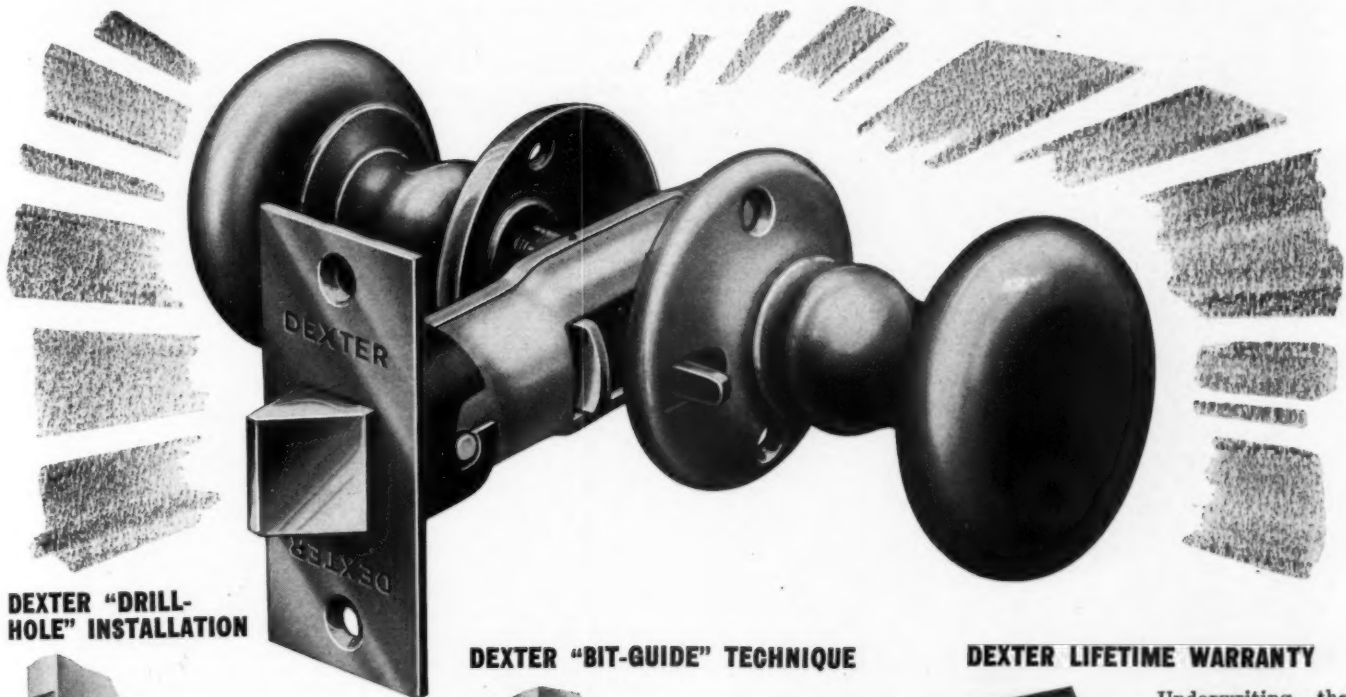
Save Vital Time

DEXTER-TUBULAR LOCKS & LATCHES SPEED INSTALLATION . . . SAVE TWO HOURS IN THREE . . . CERTIFIED TO CONFORM WITH FEDERAL EMERGENCY SPECIFICATIONS ON DEFENSE HOUSING

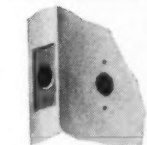
What we produce today is worth twice that produced tomorrow. Ours—of the building industry—is to provide homes for Defense Workers. It is a big job for housing in vital Ordnance centers is severely critical. But we can do it by taxing every precious moment and making use of every facility.

Thus—not alone in saving costs but saving vital time—are Dexter-Tubular Locks and Latches playing an important role. You will receive a new concept of fast application after you have examined Dexter "Drill-Hole" installation via the "Bit-Guide" technique. And you will be impressed by its rugged quality in all steel trim, glass knob trim, Duralin (plastic) trim.

Let us send you—of course, without obligation—the new Catalog. Twelve pages of Dexter-Tubular Locksets and Latchsets certified to conform with Federal Emergency Specifications on Defense Housing. Each set illustrated complete—no compiling of catalog numbers—easy to use, simplifies the work of figuring Defense Housing jobs—Federal Type Numbers listed under each item. Write for your copy.



DEXTER "DRILL-HOLE" INSTALLATION



Bore two holes—insert the unit like a bullet—that is the principle of Dexter installation. No deep mortising—saves two-thirds that time. Three doors can be Dexter equipped in the same time as one the ordinary way.

DEXTER "BIT-GUIDE" TECHNIQUE



Clamp the Bit-Guide on the door, automatically self-centers, directs the boring straight and true. It's like using a jig in streamline factory methods—makes application a fast, simple, operation.

DEXTER LIFETIME WARRANTY



Underwriting the Dexter is a Warranty Bond—positive certification of its performance. However, nothing counts like experience. Dexter is the Original, the pioneer of Tubular. It's got to be good—proven successful over the years.

LET US SEND YOUR CATALOG...NO OBLIGATION

National Brass Company, Mfrs.
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Grand Rapids, Mich.

Kindly send Free Catalog on Dexter-Tubular Locks and Latches together with complete "Time Saving" installation information.

Name.....
Address.....
City.....State.....

FHA Title VI to Be Liberalized

(Continued from page 66)

build and sell homes in the \$6,000 price range. Large numbers of builders have plans drawn and are ready to go into immediate operation on houses in this price range as soon as the bill passes. The \$4,000 limitation was the principal stumbling block to private builders in northern areas where high construction costs make it virtually impossible to construct homes within this mortgage figure. The new bill increases the size of mortgage permitted on two-family houses to \$7,500, on three-family houses to \$9,500, and on four-family houses to \$12,000.

Increasing the length of the mortgage to 25 years is of especial importance to builders of Title VI rental jobs. The cost of carrying these properties will be materially reduced by the extension of the loan period. Since there is a rental ceiling of \$50, this reduction in carrying costs will be an important contribution to the profitable operation of the rental jobs. Under the former setup it was difficult, if not impossible in some areas, to make such jobs pay out under the \$50 rent limitation.

If this bill passes Congress quickly it will enable private builders to get into operation in a hurry in areas where war workers are in dire need of houses. If there is a long delay in its passage the peak of the building season will have passed and the housing situation will become still more serious.

As this issue goes to press there is no indication as to how long it will take to get this bill through Congress. Indications are that it has the approval and sponsorship of the Administration, but it is too early to determine whether any serious opposition will occur. Every man in the building industry whose livelihood is so vitally concerned with the passage of this bill would do well to follow its progress closely, and if there appear to be any signs of undue delay, to get in touch with his congressman.

Huge Building Program for Plant Expansions

OFFICIAL figures from Washington indicate the size and extent of the war program for new armament plants and for remodeling and adding to existing plants. As of February 28, authorized projects totaled 7,297, of which 1,060 were for government commitments and 6,237 for private commitments. The total investment for this industrial plant expansion and conversion program is estimated at \$11,259,000,000. The government projects average \$900,000 each, while the private industry projects average \$317,000 each. It is expected that with the further extension of subcontracting of war work and the more complete conversion of peacetime goods production to war production the number of small plant remodeling and building jobs will very greatly increase and will cover practically the entire nation, wherever existing plant facilities and labor are available.

Housing Facts Revealed by 1940 Census

THE CENSUS of Housing undertaken in the United States as a part of the 1940 Decennial Census revealed these facts:

There were in the United States as of April 1, 1940, more than 37 million dwelling units of which nearly 35 million were occupied.

These were distributed as follows:—In cities of 2,500 and over, 20,597,520; in rural areas but not on farms, 7,151,471, and on farms, 7,106,561.

Nearly 44 percent of all homes were occupied by owners. The average monthly rental of tenant-occupied homes and the rental value of owner-occupied homes (not including farm homes) was \$27.46. This would mean a monthly rent bill, or equivalent in case of owner-occupied, of \$762,000,000, not including farm homes. This would be in excess of nine billion dollars annually.

Monthly city rents averaged \$30.84 and in rural nonfarm homes the average was \$18.35.

The percentage of home ownership declined more than four points in ten years—from 47.8 in 1930 to 43.6 in 1940.

Less than half of the owner-occupied nonfarm homes are mortgaged.

Nine percent of occupied units housed more than 1½ persons per room indicating overcrowding. On farms 16.1 percent had occupancy of more than 1½ persons per room.

More than half—54.7 percent—of all dwelling units had private baths

More than 18 percent of all homes were in need of major repairs.

The number of families increased 16.6 percent in ten years while total population increased only 7.2 percent, size of families decreasing to 3.8.

In cities percentage of units not equipped with private bath was 23.3; in rural nonfarm, 60.7, and on the farm it was 89.4.

Dwellings needing major repairs were 11.5 percent in cities, 21.4 percent in rural nonfarm, and 33.9 percent on farms.

Among farm homes, 5,939,779 or 78.9 percent had outside toilets; 697,634 or 9.3 percent had neither indoor nor outdoor toilets; 6,011,606 or 82.3 percent had no running water, and 31.3 percent had electric lighting.

The high rent area included the District of Columbia and the states bordering on the Great Lakes and those which form the northeastern coastline from Massachusetts to Delaware.

SUMMARY OF HOUSING IN THE UNITED STATES AS SHOWN BY THE 1940 CENSUS OF HOUSING

ALL DWELLING UNITS: Total, 37,326,682; occupied, 34,855,552; owner-occupied, 15,196,188 or 43.6 percent; vacant, for sale or rent, 1,864,483; vacant, not for sale or rent, 606,647; needing major repairs, 6,413,553 or 18.3 percent; without private bath, 15,855,246 or 45.3 percent; having more than 1½ persons per room, indicating overcrowding, 3,087,070 or 9 percent; occupied by non-white families, 3,293,103 or 9.4 percent; average monthly rent (not including farm units) \$27.46.

DISTRIBUTION—OCCUPIED: Urban (in cities of 2500 and over), 20,597,520; rural nonfarm, 7,151,471; rural farm, 7,106,561.

URBAN GROUP: Total units, 21,617,564; occupied, 20,597,520; vacant, for sale or rent, 918,397 or 4.2 percent; vacant, not for sale or rent, 101,647 or .5 percent; owner-occupied, 7,715,385 of which 3,682,310 or 50.6 percent are mortgaged; occupied by non-white, 1,727,722 or 8.4 percent; average monthly rent of rented and vacant units and rental value of owner-occupied units, \$30.84; with more than 1½ persons per room, 1,171,736 or 5.8 percent; needing major repairs, 2,298,372 or 11.5 percent; without private bath, 4,675,832 or 23.3 percent.

RURAL NONFARM GROUP: Total units, 8,066,835; occupied, 7,151,471; vacant, for sale or rent, 510,676 or 6.3 percent; vacant, not for sale or rent, 404,688 or 5.0 percent; needing major repairs, 1,636,647 or 21.4 percent; without private bath, 4,650,497 or 60.7 percent; average monthly rental of rented and vacant units and rental value of owned units, \$18.35; owner-occupied units, 3,698,076 or 51.7 percent; owner-occupied mortgaged, 1,121,734 or 33.6 percent.

RURAL FARM GROUP: Total units, 7,642,283; occupied, 7,106,561; vacant, for sale or rent, 435,410 or 5.7 percent; vacant, not for sale or rent, 100,312 or 1.3 percent; needing major repairs, 2,478,534 or 33.9 percent; without private bath, 6,528,917 or 89.4 percent; outside toilets, 5,939,779 or 78.9 percent; without indoor or outdoor toilet, 697,634 or 9.3 percent; no running water, 6,011,606 or 82.3 percent; electric lighting, 2,351,124 or 31.3 percent; owner-occupied, 3,782,727 or 53.2 percent; overcrowded, 128,443 or 16.1 percent.

STATES WITH HIGHEST RENTAL VALUES (Urban and Rural Nonfarm only): District of Columbia, \$53; New York, \$39.83; New Jersey, \$37.43; Connecticut, \$36.22; Delaware, \$33.95; Massachusetts, \$33.34; California, \$31.27; Illinois, \$30.54; Maryland, \$29.77; Michigan, \$29.35; Wisconsin, \$28.39; Ohio, \$27.67; and Pennsylvania, \$27.66.

STATES WITH LOWEST RENTAL VALUES (Urban and Rural Nonfarm only): Arkansas, \$12.32; Mississippi, \$12.93; Alabama, \$13.36; South Carolina, \$14.76; New Mexico, \$15.49; Georgia, \$15.53; Oklahoma, \$16.47; North Carolina, \$16.59; Louisiana, \$16.61; South Dakota, \$16.84.

Nail Production to Be Increased

AN INCREASED production of nails has been asked by the WPB. In an effort to conserve steel, lumber is being used to a much greater extent in wartime building construction. This in turn has imposed an extra burden on the supply of nails. The division of materials, therefore, has directed twenty-six common nail manufacturers to produce a total of 72,000 tons of nails a month during April, May, June, and July. Nail production averaged 55,000 tons a month in 1940 and had climbed to 65,000 tons a month by 1941. Nail manufacturers have been directed to sell only on orders carrying preference ratings.

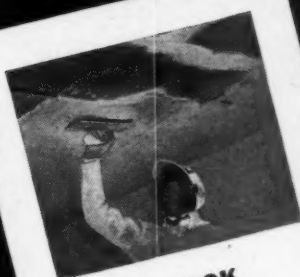
ARMSTRONG'S TEMLOK

DOUBLE PURPOSE INSULATION



TEMSEAL SHEATHING

Permanent insulating efficiency in combination with adequate bracing strength.



TEMLOK LATH

Dependable insulation and excellent plaster base in one economical material.



TEMLOK DE LUXE

Insulation plus interior finish. Factory-colored panels, planks, and boards.

See SWEET'S
for complete
specifications

Armstrong is Insulation Headquarters

Forty years ago Armstrong pioneered the modern use of insulation. Long experience, coupled with constant scientific research, is reflected in the quality and practicability of Armstrong's Temlok. Write for free samples. Armstrong Cork Company, Building Materials Division, 979 Concord Street, Lancaster, Pennsylvania.



ON & OFF the RECORD

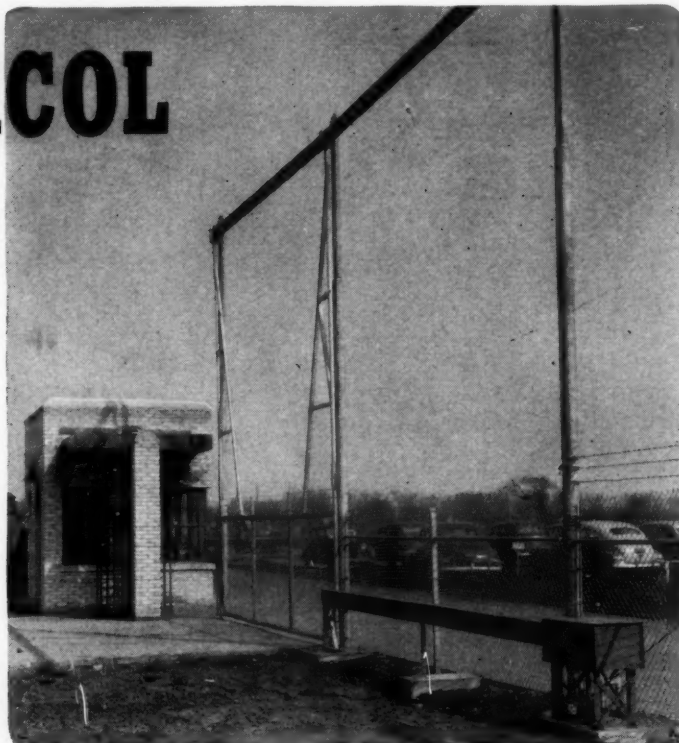
News, Views and Comments
Washington Developments

by *Structor*

GREAT RELIEF—The long-postponed, oft-revised and much discussed "freeze" order finally came out last month—not as a freeze order but as a rather reasonable, and on the whole sensible, program to conserve construction materials. (See page 39.)

Building material men are glad to have the uncertainty and the terrific rumors at an end. At last now they know where they stand (or lie) and can act accordingly.

BARCOL



Electric GATE OPERATOR FOR A DEFENSE PLANT...

Through this entrance pass men, trucks, and railroad cars. The main gate is supported on truss frames from a high overhead track, and is controlled from inside the gate house by a simple push-button control. The Barcol Electric Gate Operator is mounted in a weather-proof housing alongside the fence.

PROTECTION • TIME-SAVER...

An electric gate operator not only permits the guard to handle the gate promptly and efficiently, but also assures long life and minimum maintenance on the gate itself. Barcol Electric Operators are available for swinging and sliding gates, and also for swinging, sliding, overhead, and steel rolling doors. Consult your Barcol representative for further details.



BARBER-COLMAN COMPANY

104 MILL STREET • ROCKFORD, ILLINOIS

SALES, INSTALLATION, AND SERVICE REPRESENTATIVES IN PRINCIPAL CITIES

BILL KAHLER—To administer the complex War Production Board regulating of the construction industry, a new division is being established with William V. Kahler in charge. He has a big job but also has a reputation as a good administrator. Kahler is on leave from the Illinois Bell Telephone Company, where he was chief engineer of the Chicago area. Recently he has been special assistant to William Harrison, Director of WPB's important Production Division, and has already become acquainted with many of the problems involving building.

A-2 PRIORITIES—The War Production Board's housing quotas announced in March provided for 200,000 houses by private builders and 150,000 by public. Now it becomes apparent that *private builders who build rental housing are getting an A-2 rating, while houses they build for sale are getting an A-5.* WPB said that 50 per cent of the privately built homes must be for rent. However, they gave builders a small break by adding that they would classify under the rent quota houses sold on the rental-purchase plan. Another requirement is that defense housing must rent for an amount not in excess of 20 per cent of the income of the worker. This is something that will have to be fought out locally.

H.R.6927—This bill, which after unconscionable delay finally was presented to Congress April 14th, has what is needed to give thousands of private home builders the go-ahead signal on war homes. (See page 66.) By raising the Title VI mortgage limit to \$5,400 it makes such building possible in northern high-cost areas as well as in the South. If Congress doesn't act quickly on this bill you had better start sending letters and telegrams. *Without it the private home builder is out of business.*

FLYING PRESIDENT—When you get around among home builders you realize that we have some mighty interesting personalities among us. Take, for example, Harry J. Durbin, the new "flying president" of the National Home Builders Association. *He owns his own plane, is a licensed pilot and insists on flying wherever he goes—and fast.* He has a fine building organization in Detroit and three husky sons to help him carry on. Durbin is a self-made man, having worked his way through Michigan State College. His specialty is the "Durbin duplex" which has become world famous. He built 400 houses last year and is planning to hit an all-time high with 1,000 this year—mostly under Title VI. He thinks they are a good investment.

\$15 TIP—The value of membership in a local builders' association was strikingly illustrated recently by Edward Kuhlman of Detroit. He said that since the Detroit Association was formed, bitter competitors now get acquainted at meetings and become good friends. He said that following one meeting one of his competitors gave him a friendly tip over a bottle of beer *which has saved him \$15 a house ever since.* Kuhlman remarked that in Detroit building workmen all pay annual dues that are sky high in relationship to the \$25 builders pay to their association.

TOUGH PRIORITY FORMS—Builders everywhere are complaining about the enormous detail involved in making out the various forms required in connection with defense housing. In Detroit, the Builders Association has assigned one man to help builders make out their forms. Recently he estimated that in making out the papers on a simple 15-house job he had to write in the word **NONE** 2,880 times!

INCOME TAX AND TITLE VI—One fact about building and owning FHA Title VI defense houses that many smart builders have not overlooked is the effect of such ownership on their income taxes. *The builder who holds such houses, they say, will be able to depreciate them 3 per cent each year, which should practically offset income.* Thus the properties will be held tax-free.

By selling Title VI houses over a period of years the profits—if any—will be spread out more than if they were all sold at one time. They say this constitutes a good way to taper off activity.

PREVAILING WAGE BOGEY—Something else for builders to worry about is the danger that private builders of defense homes will be forced to pay "prevailing wages," which are usually defined as the highest scale paid by heavy contractors on public works. In Washington, D. C., recently, the Labor Department decided that such artificially high scales should be paid on publicly financed government housing projects. *This automatically raised the wages of residential workers in the area, making it difficult if not impossible for private builders to operate.*

PRIORITY ANOMALY—With building Conservation Order L-41 in effect and numerous other tight controls placed over all critical building materials, it hardly seems necessary for the War Production Board to require so many detailed forms in connection with defense housing. *Why should a 72-sheet form, listing the almost countless items that go into a house, be necessary?* Certainly builders are not going to install more materials or equipment than they can use. In the past they have always been accused of just the opposite. The private defense housing procedure can now be greatly simplified and speeded up. *What is needed now is action, not red tape.*

BLANDFORD AND CONGRESS—Czar Blandford of National Housing Agency is publicity shy to a painful extent: he has issued hardly a statement since taking office. It is hard to tell whether he has accomplished anything; but it's too early to judge.

One thing that is unhappily too clear to the building industry is that there was a disastrous delay on the FHA amendments to liberalize Title VI and to authorize an extension of \$500,000,000 to its mortgage fund.

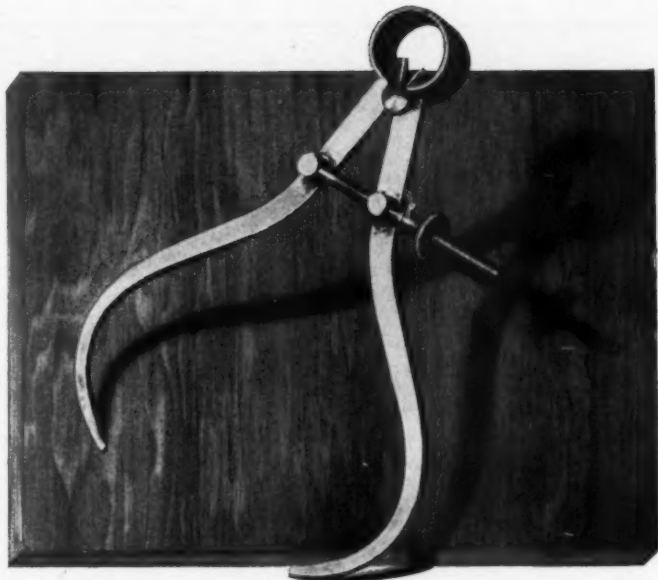
A bill incorporating these provisions was drafted several months ago, was approved by FHA and other agencies, and should have been presented to Congress. In the meantime FHA exhausted its Title VI fund and was unable to make further commitments.

It looks like a showdown eventually between private and public financing of defense housing. If we do not have quick action on the Title VI amendments (Bill HR 6927), it will mean the end of private home building. Then the "public housers" will have a clear field to ball things up in their own special and peculiar way.

WHO WILL BUILD?—If the thousands of capable private builders of homes are not permitted to function, who will build needed war worker housing? Of course, the public housing advocates will be willing volunteers, but on the basis of past experience—which in such a complicated industry as home building is a mighty good guide—the nation's workers will go homeless a long time if they have to wait for the public agencies to function satisfactorily.

The present prefabricated house mixup is a good sample. A little while ago publicity handouts gave the impression that a vast program of prefabricated demountable houses was getting under way which would sweep swiftly forward to unprecedented records.

That was some months ago. *Very few of the houses have been built yet, and for the most part the picture in connection with prefabrication is one of frustration, delay and complete confusion.* The prefabricators who claim they bought thousands of dollars worth of materials and equipment on the promise of government orders say the plans and specifications have been changed so often that they cannot keep track of them and that they are facing terrific losses.



TRADE MARK REG. U. S. PAT. OFF.

Laux REZ

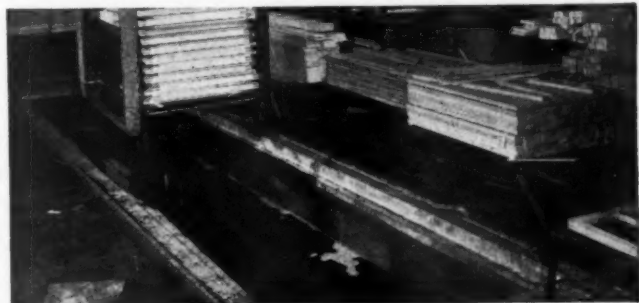
CONTROLS DIMENSION



SWELLING and BINDING caused by moisture penetration in doors, sash, cabinets, etc., can be controlled by sealing and priming first with Laux REZ, clear synthetic resin sealer.

This water-repellent toxic . . . applied on the job with brush, spray or saturated cloth . . . is also a perfect base for paint or stain on all woods, including fir plywood. REZ checks grain raise and gives a sealed, even surface for decorating.

Lumber, hardware and paint dealers all supply Laux REZ, the first and still the best synthetic resin sealer . . . or write to addresses below for full information.



TANKS FOR DEFENSE—Waste helps the Axis. Dry rot, mould, decay in siding, millwork, flooring, sash, doors are being stopped by tanks filled with Laucks Industrial Wood Preservatives . . . tanks built by contractors, dealers, millwork plants. Write today for descriptive brochure on these industrial water-repellents and toxics.

I. F. LAUCKS, Inc.

Seattle, 911 Western Ave., Div. B Los Angeles, 859 E. 60th St., Div. B
Chicago, 6 N. Michigan Ave., Div. B
Portsmouth, Va., Commerce and Broad Sts., Div. B
Vancouver, B. C., Granville Island, Div. B

NEWS of the MONTH

Fuel Savings of Insulation Told

WITH THE AIM of arousing America's future builders to the importance of insulation, Paul D. Close, technical secretary of the Insulation Board Institute, has recently scheduled a series of talks before architectural and engineering students at a number of universities.

Mr. Close spoke at the University of Illinois on April 8. Previously he addressed students of Michigan State College and the University of Kentucky.

"Ten or fifteen years ago practically every foot of insulation

was sold on the basis of what it would do," he told the Illinois students. "This has become less necessary each year because the advantages of insulation have become better known, and yet even today only a small percentage of new houses have any insulation, in spite of the small additional cost.

"Building insulation is one of the best investments the home owner can make. As a matter of fact, the owner pays for the insulation whether he gets it or not. He pays for it in wasted fuel if he doesn't insulate, whereas if he does insulate he benefits by a yearly fuel saving that will soon liquidate the cost of the insulation and thereafter yield handsome dividends. In addition, greater year 'round comfort is obtained which cannot be evaluated in dollars."

Complete house insulation, he advised, should include the glass areas (storm windows and weatherstrips), as well as wall and ceiling, or roof, surfaces.

Mr. Close explained how the approximate fuel saving for any installation of insulation could be determined. Taking a specific American Colonial frame six-room house as an example, he showed the percentages of fuel saving obtainable through the use of various types and thicknesses of insulating board.

With no wall insulation, he said, these ceiling and roof insulations would effect the following fuel savings: half-inch insulating board lath or interior finish in ceiling, 6.2 per cent; one-inch lath or interior finish in ceiling, 10.3 per cent; one-inch lath or interior finish in ceiling plus half-inch board on roof rafters, 13.1 per cent; one-inch board in ceiling plus half-inch board on top of ceiling joists, 13.8 per cent.

Without ceiling or roof insulation, these fuel savings would result from wall insulation: half-inch lath or 25/32-inch sheathing, 11.3 per cent; sheathing plus half-inch lath or interior finish, 18.8 per cent; sheathing plus one-inch lath or interior finish, 22.5 per cent.

Insulation in both ceiling and walls, he said, would produce the following savings in fuel:

Half-inch lath or interior finish on walls and ceiling, 17.5 per cent.

One-inch lath or interior finish in ceiling and half-inch lath in walls, 21.6 per cent.

Half-inch lath or interior finish in ceiling and sheathing plus half-inch lath in walls, 25 per cent.

One-inch lath or interior finish in ceiling and sheathing in walls, 24.4 per cent.

One-inch lath or interior finish in ceiling, half-inch board on top of ceiling joists, sheathing and one-inch board in walls, 36.3 per cent.

Had America as a whole been quicker to accept the advantages of insulation, Mr. Close told the students, the nation now would be in a better position to pursue its war effort. If all homes were properly insulated, the amount of fuel needed for residential heating would be reduced 25 to 50 per cent and thousands of freight cars and tankers would be released for other transportation.

Did You Know?—

Douglas fir is manufactured in over 600 standard commercial items and used for more different purposes than any other wood.

Sitka spruce, the famed airplane wood of the world, possesses a ratio of high strength for weight, being stronger than steel pound for pound.

Seasoned lumber has excess moisture removed, weight lowered, shrinkage minimized and a marked increase gained in strength and resistance to decay.



WITH the Government's limitation in private building, many contractors will be doing important war construction in cooperation with army officers. Much of this construction will include concrete—all of it will be in a hurry. No matter how big or how small the job, use Medusa "Medco" High Early Strength Cement. You save from 5 to 7 days' time waiting for the concrete to arrive at safe working strength. "Medco" requires no special knowledge for handling. It's used like regular gray Portland cement. When the "Colonel" says to step on it, that means to use "Medco." You save on forms, you save time, you save work. And most important of all—you speed up all concrete work. Just remember that

our enemies make use of every minute. Let us do likewise. Send the coupon below for complete information on "Medco" High Early Strength Cement.



MEDUSA

PORTLAND CEMENT CO.

1002 Midland Building • Dept. B • Cleveland, Ohio

Gentlemen: Please send me a copy of the booklet "Medco High Early Strength Cement."

Name

Address

City State

Also made by Medusa Products Co. of Canada, Ltd., Paris, Ont.

Remodeling and Repair Figures for 1941

MODERNIZATION or conversion of single-family houses continued to be the purpose of three out of every four loans reported by private financial institutions last year for insurance under Title I of the National Housing Act, Federal Housing Commissioner Abner H. Ferguson has announced.

Last year 524,134 such loans for \$194,081,736 were reported for insurance, or 76.4 percent of the total number and 68.7 percent of the total amount. This compares with 495,282 for \$188,464,031 reported for this purpose in 1940, or 75.2 percent of the number and 68.2 percent of the amount.

The record volume of 686,016 loans for \$282,646,332 reported for insurance under Title I last year was distributed a little more evenly among all types of industry in the housing field than in the previous year.

Heating still led the list in the types of improvement, the major portion of the proceeds of 24.3 percent of the total number and 20.5 percent of the total amount of all loans reported being for heating equipment and installation. This compares with 28.7 percent of the total number and 24.0 percent of the total amount for 1940.

All types of improvement except heating and new residential construction showed an increase in actual number and amount of loans over 1940, together with an increase in their ratios of the total volume of business. Many of the loans resulted in more dwelling units for war industry workers or in the maintenance of properties in good repair.

The following tables show the number and amount of Title I loans reported by private financial institutions for insurance in 1941, by types of property improved, and by types of improvements to which the major portion of the proceeds of the loan were devoted, and the ratio for each type. In many cases loans reported for one type of improvement are used for several.

LOANS REPORTED FOR INSURANCE IN 1941 UNDER TITLE I, NATIONAL HOUSING ACT

Type of Improvement	Number	Per cent	Amount	Per cent	Average Loan
New residential construction	7,480	1.1	\$20,521,175	7.3	\$2,743
New non-residential constr...	18,449	2.7	9,234,805	3.3	501
Additions and alterations...	91,962	13.4	51,352,013	18.2	558
Exterior painting	123,293	18.0	52,594,224	18.6	427
Interior finish	46,911	6.8	19,536,065	6.9	416
Roofing	96,423	14.1	23,727,596	8.4	246
Plumbing	65,387	9.5	25,234,419	8.9	386
Heating	166,844	24.3	58,077,764	20.5	348
Miscellaneous	69,267	10.1	22,368,271	7.9	323
Total	686,016	100.0	\$282,646,332	100.0	\$ 412

Type of Property	Number	Per cent	Amount	Per cent	Average Loan
Single-family dwellings	524,134	76.4	\$194,081,736	68.7	\$ 370
2-or-more-family dwellings	77,525	11.3	43,208,076	15.3	557
Commercial and industrial	29,746	4.3	21,563,474	7.6	725
Farm houses and buildings	31,121	4.6	12,412,082	4.4	399
Other structures	23,490	3.4	11,380,964	4.0	485
Total	686,016	100.0	\$282,646,332	100.0	\$ 412

Pittsburgh Plate Promotes Higgins

H. B. HIGGINS, who has been associated with the Pittsburgh Plate Glass Company since 1905, has been elected executive vice president of the Company. He is a director of the Company and has been a vice president since 1928. He heads the Company's merchandising division and has been active in sales and distribution activities throughout his business career.



H. B. HIGGINS

Here's why you'll know
more about **Finishing**
the **Plywood** you use in
post-war housing!



TO HELP SPEED VICTORY
the Douglas Fir Plywood Industry is devoting its entire capacity to war production. We know this program has your approval.

● What finishes stand up best on Douglas Fir Plywood? This Weather-ometer is helping us answer this question quickly and scientifically since it can duplicate the effects of a full year's exposure to any natural climatic condition in just one month's time or less. The results of each test, each formula change, each new mixing or application technique are carefully recorded, because from this material will come finishing data that will some day benefit every user of Douglas Fir Plywood. . . . And this is only *part* of our extensive research program. We are doing everything possible *today* so that *tomorrow* Douglas Fir Plywood—"the modern miracle in wood"—will be more useful to you than ever before!

DOUGLAS FIR PLYWOOD

Real Lumber
**MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER**

The Douglas Fir Plywood Association welcomes inquiries as to the uses and characteristics of Douglas Fir Plywood. However, non-defense inquiries as to the availability or delivery of Douglas Fir Plywood must be directed to your distributor. Douglas Fir Plywood Assn., Tacoma, Wash.

Construction Superintendents Applying for Government Positions

THE FOLLOWING notice from the Civil Service Commission, Washington, D. C., may be of interest to construction superintendents who failed to apply last year for this work.

The Commission is now accepting applications from superintendents of construction for positions ranging in salary from \$3,200 to \$6,500 a year. Men are wanted who are thoroughly familiar with the building industry—who know engineering materials, and the standards of good workmanship, and who understand the business management of large construction projects, such as the costs, estimates, etc. Experience in the field of general construction, a part of it as general superintendent on large construction projects involving excavation, reinforced concrete, steel, wood, and masonry, is required, varying in degree of responsibility and in length according to the grade of the position for which application is made.

There may be qualified persons available now who were formerly

employed in work affected by the Government's war program. Persons who are qualified and available are urged to apply at once. Announcement 217, giving further information, may be obtained, with the proper application forms, at any first- or second-class post office or from the U. S. Civil Service Commission, Washington, D. C.

Insulite at New Address

OFFICES of Minnesota and Ontario Paper Company, including those of its Insulite and other divisions, will be moved to new quarters in Minneapolis after occupying the same location for the past 19 years.

New M. and O. headquarters on the fifth floor of the Baker Building, Second Avenue and Seventh Street, will be ready for occupancy about June 1. Since 1923, company offices have been located in the Builders Exchange, 609 Second Avenue South, Minneapolis.

Decentralization Temporarily Halted

WHILE rationing of tires and cars will exert a profound effect on real estate development from the construction and income standpoint, there is no basis for believing that the trend in real estate caused by the automobile will not be immediately resumed after the war, according to Theodore A. Buenger, president of the Chicago mortgage house of Dovenmuehle, Inc., writing in The Mortgage Banker, magazine of the Mortgage Bankers Association of America.

Automobile Affects Real Estate

"An intimate connection between transportation and real estate development has long been recognized. If the war ends soon, the car and tire restrictions will have but little effect on real estate. But if it is to be a long war, certain consequences may well result from this curtailment.

"Dwelling accommodations near the shopping centers will become more desirable. 'Within walking distance' may be revived as a slogan. Apartment buildings and hotels close to central districts should be favorably affected as should homes and apartments convenient to outlying urban and suburban retail centers. As the result of better residential rents in these districts while the war lasts, some people will be tempted to buy homes and apartments there.

Return to Suburban Trend After the War

"But when the war has been won, we'll go right back to where we are leaving off. Many families with children will again push out into the suburbs to build their new houses. Accessibility by automobile will again be a factor in determining the desirability of business property. Close-in properties will again have to rely solely on their indisputable advantage as a place to live, without any help from a shortage of motor cars. And the villages that during the war will have grown up around outlying factories will perhaps remain if the factories are converted to peace time uses. Otherwise," Mr. Buenger concluded, "the inhabitants will use their post-war automobiles to drive to other factories just as if in the first place they had bought a house that was many miles away from the place where they earned their livelihood."



STRANGE STORIES

- THAT "STICK"

LAUCKS CONSTRUCTION GLUES

ARE USED IN BUILDING U.S. NAVY MINESWEEPERS

9 YEARS UNDER WATER
Two pieces of wood glued together and submerged in water in 1933 in the Laucks Laboratory are still holding firm!



\$20,000 TABLE



CICERO PAID \$20,000 FOR A GLUE VENEERED CITRUS WOOD TABLE—According to Pliny—Roman Naturalist of 2000 Years ago

I. F. LAUCKS, Inc.

MANUFACTURING CHEMISTS
"Leadership through Research"
Seattle — 911 Western Ave.
Chicago — 6 North Michigan Blvd.
Los Angeles — 859 E. 60th Street
Vancouver, B. C. — Granville Island
Portsmouth, Va. — Commerce and Broad Sts.

SPEED! Necessity for speed first turned yesterday's doubts about glue in construction into enthusiastic endorsement. Now American builders and prefabricators know that Laucks Construction Glue methods not only are faster . . . but also are stronger . . . and save precious metal for combat use.

On history's biggest housing projects, wall panels are "glue-welded" to joists and studding in assembly line procedures. Glue-laminated arches and beams replace steel . . . and qualify fully for strength. Wood and Laucks Glue are joining forces in scores of new and vital ways in building construction as well as in wartime industries, in aircraft and boat-building . . . to speed America's production for victory.

SELF-BONDING—Make permanent bonds without heavy weights or clamps.

WATER-RESISTANT—Meet U. S. Army, Navy and Federal aircraft specifications.

STRONGER—"Stronger than nails by test" . . . and easier to get.

CONTRACTORS, BUILDERS,
ARCHITECTS, DEALERS—
WRITE LAUCKS FOR
FULL INFORMATION



• **LAUCKS CONSTRUCTION GLUES** •

Armstrong Develops Mineral Wool Board

A MINERAL wool board type of insulation for cold storage rooms and equipment has been introduced by the Building Materials Division of the Armstrong Cork Co., Lancaster, Pa., as a permanent addition to the Company's line of low temperature insulation products. This new insulation is a nonpriority material and is available for all kinds of installations.

Armstrong's Mineral Wool Board, which has been developed and proved in more than 200 installations within the past six months, offers lasting insulating efficiency along with practical workability. It equals or exceeds Federal Specification HHM-371 for board or block form insulation, having a thermal conductivity as determined by tests of average material produced ranging from 0.31 to 0.33 at 90° F.

This new material has good moisture resistance and has ample structural strength for satisfactory handling in erection. It is self supporting and will stay permanently in place without sagging, settling, shrinking, swelling, or warping. The new product additionally is free from objectionable odor and from any liability to rot, mold, or harbor vermin.

Manufactured in board size of 12" x 36" and in thicknesses of 1", 1½", 2", 3", and 4", Armstrong's Mineral Wool Board is applied essentially the same as corkboard. Erection in hot asphalt with multiple layer construction is recommended by the manufacturer. The material may be finished with Armstrong's Asphalt Plastic or Portland cement plaster.

Certain-teed Corp. Moves to Chicago

H. J. HARTLEY, president of Certain-teed Products Corporation, has announced that the General Offices of the company moved from New York to 120 South LaSalle St., Chicago, on April 11.

Ponderosa Pine Woodwork Elects

AT THE ANNUAL meeting of Ponderosa Pine Woodwork, held at the Blackstone Hotel, Chicago, on Feb. 10, Alva R. Tipton of Muscatine, Ia., was elected president, L. H. Atkinson of St. Paul, Minn., vice-president, and Archie D. Walker of Minneapolis, treasurer.



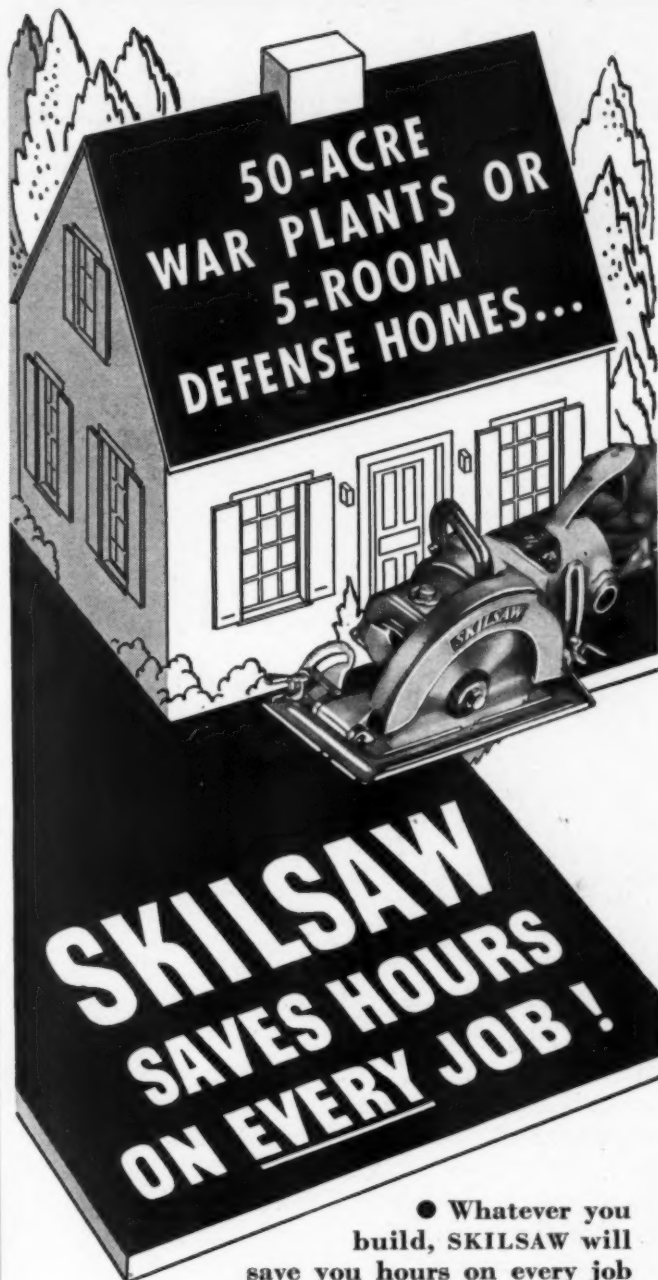
A. R. TIPTON



R. M. BODKIN

The following men were elected to comprise the new Board of Directors: Fred C. Andersen, Andersen Corporation, Bayport, Minn.; Luther H. Atkinson, Weyerhaeuser Sales Co. St. Paul, Minn., (vice-president); D. E. Brown, Long-Lake Lumber Co., Spokane; H. C. Bullard, Gregg & Son, Nashua, New Hampshire; E. J. Curtis, Curtis Companies, Inc., Clinton, Iowa; U. Morgan Davies, Morgan Company, Oshkosh, Wisconsin; Arthur C. Hansen, Huttig Manufacturing Co., Muscatine, Iowa; Ralph J. Hines, Edward Hines Lumber Co., Chicago; Earl Kenyon, The Long-Bell Lumber Co., Kansas City, Mo.; M. P. McCullough, Alexander-Yawkey Lumber Co., Chicago; A. G. Peterson, Northern Sash & Door Co., Hawkins, Wis.; L. J. Roedel, Oregon Lumber Co., Baker, Oregon; E. L. Shevlin, Shevlin Pine Sales Co., Minneapolis, Minn.; Frank Stevens, Ideal Company, Waco, Texas; A. R. Tipton, Roach & Musser Co., Muscatine, Iowa (president); Archie D. Walker, The Red River Lumber Co., Minneapolis, Minn. (treasurer); Lester G. Wendt, Carr, Adams & Collier Co., Dubuque, Iowa.

The progress of Ponderosa Pine Woodwork during the past year was reviewed in detail by Robert M. Bodkin, general manager. Mr. Bodkin pointed out that over 60,000 inquiries had been received in response to advertising during the last seven months of 1941. Sales of 24,000 copies of the booklet, "Open House," primarily to jobbers and lumber dealers have developed since its publication in July. These and many other results of the co-operative promotion campaign exceeded all expectations. Jobbers and dealers are supporting the campaign, it was stated.



● Whatever you build, SKILSAW will save you hours on every job because it saves minutes on every cut! That's why you need SKILSAW more than ever now . . . when Defense Homes must be built faster in spite of the shortage of manpower . . . when War Plants must be finished sooner to step-up America's Victory program!

SKILSAW cuts faster because it is more powerful . . . gets more work done because it is lighter, more compact, easier-to-handle. 9 POWERFUL MODELS for all sawing on wood, metals and compositions. Ask your distributor for a demonstration.

SKILSAW, INC., 5031 ELSTON AVE., CHICAGO

New York • Boston • Buffalo • Philadelphia • Cleveland
Detroit • Indianapolis • St. Louis • Kansas City • Atlanta
New Orleans • Dallas • Los Angeles • Oakland • Seattle • Toronto, Can.

SKILSAW PORTABLE ELECTRIC TOOLS

★ MAKE AMERICA'S HANDS MORE PRODUCTIVE ★

RYBOLT

THE RYBOLT HI-BOY SPECIALLY DESIGNED *for War Housing*



Here's a new RYBOLT heating unit that perfectly meets War Housing conditions, particularly where every inch of floor space counts. Unusually compact, takes only 26" x 26" floor space. 72" high with blower underneath heating element. Steel coal-fired heating element, welded construction. A dependable unit with ample heating capacity for the small or even medium sized house. Attractive baked enamel finish. Priced low enough to come well within War Housing cost restrictions.

RYBOLT Series 1815 18" Gravity Furnace

A compact small-capacity gravity furnace that is ideal for the space and price limitations of War Housing. Dependable and economical, with ample heating capacity. One-piece radiator, feed section and ashpit. Attractive modern design.



**... LOOK TO RYBOLT for your
War Housing Heating Equipment**

Write for complete information



THE RYBOLT HEATER CO.
619 MILLER STREET • ASHLAND, OHIO

Kimsul Sales Meetings

KIMBERLY-CLARK Corporation, Neenah, Wisconsin, and Niagara Falls, N.Y., manufacturers of wood fiber products, sponsored a 2-day sales and merchandising conference at Hotel Lexington, N.Y., March 20 and 21.

Twenty-five sales representatives of the Creped Wadding Department, covering all of New York state and New England, were welcomed by District Manager Scott B. Fithian. Clinics on merchandising, advertising, sales promotion, distribution, production and service were conducted by:

A. D. Harvey, Department Sales Manager.

R. B. Sawtell and F. A. Biederman, Assistant Sales Managers.

K. C. Kerrihard, R. A. Wolterding, Mark W. Keyes and W. W. Cross, Product Engineers.

Business conditions, particularly the impact of War Production developments on the operation of the corporation and its customers, expansion plans, and marketing problems, were discussed. Similar district meetings are being held throughout the country.

Information on Clear Pine Paneling

THE WESTERN PINE Association, Yeon Bldg., Portland, Ore., announces the release of a new 6-page folder titled "Distinctive Paneling of Clear Pine." This will be welcome news to many people because there is considerable interest in clear pine paneling at the present time. During the past year there has been a very definite trend to a greater use of the clear grades of Western Pines, not only in home decoration but in shops, hotels, schools and other public places.

The new paneling folder contains twelve excellent examples of natural, stained and enameled installations of clear Western Pines. It is a two-color folder, 3 1/4 x 6 1/8" in size. This makes it an ideal envelope stuffer, counter folder or sales promotion folder for retail lumber dealers and distributors. Space is provided on the back cover for imprinting the firm name.

Homasote Proved Good Fire Protection

DEMONSTRATION of the fire resisting qualities of Homasote, the wall surfacing, insulating material being used extensively in Government defense housing jobs throughout the country, was made unwittingly at Vallejo, California, where 977 Homasote Precision-Built homes were recently erected in 73 working days for defense workers. A cigarette was left burning in an ash tray from which it fell onto a sofa which caught fire. The fire spread rapidly and burned up everything in the house, including the refrigerator, the gas range and the hot water heater. The fire was so hot that it melted the glass in the windows and burned the exposed woodwork to a crisp.

The fire resisting qualities of the Homasote, which was used for the interior wall surfaces as well as the outside walls, was such that it was charred only half-way through and saved the building from complete ruin. Most of the studs under the Homasote were not even scorched and the fire was confined to the interior of the house.

WPB Metal Saving Order May Increase Home Comfort

A UNIQUE method for conserving metals is embodied in the new Defense Housing Critical List, effective February 24, issued by the War Production Board. For the duration of the war, no new houses for which critical materials are to be allocated may be built unless the specifications conform to a definite limitation of heat loss. Builders will regard the regulation as a progressive new principle that is likely to effect permanent changes in home design and building practice, according to a recent analysis by the National Mineral Wool Association, 1270 Sixth Avenue, New York, N. Y.

The ruling calls for a maximum heat loss of 66 Btu per square foot of floor area per hour, and a maximum output of 80,000 Btu for the heating plant of any house. Home designers will find that these heat loss limitations will enable smaller heating systems to be specified, thus reducing metal usage. At the same time, the ruling will make insulation mandatory in most cases, with increasing thicknesses being required as the location of houses progresses northward. Both demountable houses and those of conventional construction will use less fuel and be more comfortable as a result of the insulation.

LETTERS from Readers on All Subjects

Facts, Opinion and Advice Welcomed Here

Subscriber Since 1884!— Who Can Beat That?

Bayside, Long Island, N.Y.

To the Editor:

I am under the impression that your journal is in a way the successor of Carpentry & Building: I first had this magazine in 1884 and for many years after, and I have subscribed to the *American Builder* for some years. I can congratulate you on the high standard of the magazine, but it now covers a field in which I am not interested. I read it but it deals with matters outside of my woodwork. I do enjoy Mr. Dunn's editorials, and I most heartily sympathize with his views.

I have just used up the first half of my 88th year: I am not a professional builder but only an amateur woodworker in various lines, house, boat and furniture building, etc. I am buying no tools, in addition to a fairly good outfit of modern electrical saws, drill, etc., I have a very large collection of hand tools, some of them over 100 years old: I have more woodwork now under way or projected than I can expect to live to finish.

W. P. STEPHENS.

Forced to Speak Out!

Chicago, Ill.

To the Editor:

Several times during recent months I have been upon the verge of writing to express hearty approval of the efforts you have made in the interests of the building industry. Pressure of other matters and a natural reticence to "burst into print" have caused me to procrastinate, but I have reached the point where I feel I must tell you that your efforts are appreciated by all who know about them. I think they have been a very constructive force.

R. D. Scamehorn, General Manager,
MORGAN SASH & DOOR COMPANY.

Foresees Trends in Lumber Business

Kansas City, Missouri

To the Editor:

With all of the confusion existing now, due to real and imaginary shortages or scarcities in the lumber business, it is hard to try to trace a course of action.

Our impression is that, with the experience of 1941 behind us and a big Government demand thrust on us in that year, there are pretty well established indications that a total footage increase of production of all lumber can not be expected. The big increase that has taken place in the South in the last eight or ten years is almost entirely confined to the operations of the small and erratic producers.

Dimly in the future appears the necessity of filling the increased requirements of the demand with less footage of lumber shipped and cut; in short, the elimination of waste factors all along the line.

Freight is already a heavy burden on the lumber industry. It is one of the highest class rate products moved today; that is, rates in proportion to mill value. Freight rates are again to be increased, almost surely.

It is a well known fact that labor rates in the consuming districts of the United States are very high as they affect construction; and still are threatening to rise.

The only vague answer to these questions that we can see is hidden some place in a greater and better conversion of the tree into usable products with greater economy at the mills, in transit, at the yards of the retailers, and on the job. If, by this greater refinement at the mills, we can save in the amount of footage handled by the railroads, carried in stock in the retail yards, and used on

(Continued to page 78)

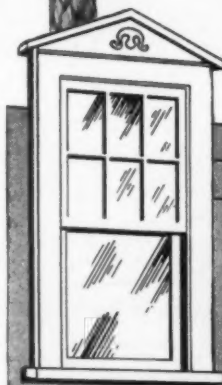


DEPENDABILITY

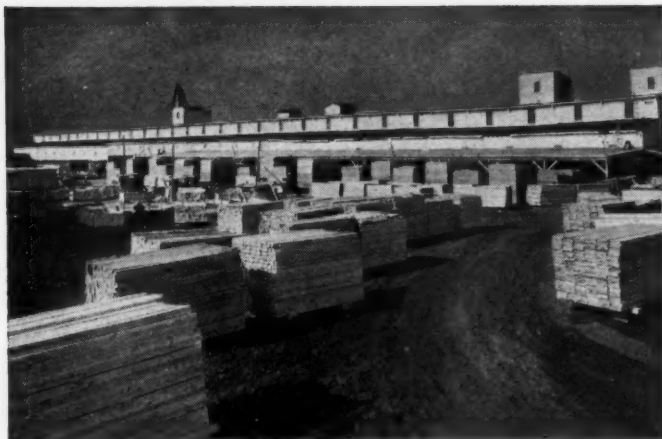
Architects and builders know that it rarely pays to gamble on doubtful, untried methods — or products. Experience has proved that there is no method of hanging windows so trouble-free as the cord, weight and pulley method. It has been time-tested and proven in service. No adjustments — no metal-to-metal contacts — therefore, no noise, no early replacements, nothing to get out of order. Proper installation using *Samson Spot Sash Cord* means a lifetime of service at reasonable installation cost.

Samson Spot Sash Cord — made of extra quality, fine cotton yarn, firmly braided for durability and smoothly finished to reduce friction over the pulleys — has maintained one high standard of quality for nearly fifty years. Identified by the *Colored Spots* — our trade mark (Reg. U. S. Pat. Off.)

SAMSON
CORDAGE WORKS
BOSTON, MASS.



durability · efficiency
... *economy* ...



This plant produces 60 HOUSES PER DAY

1000 houses a month! That is the production schedule of Barrett & Hilp, contractors—on a current defense project in Virginia. And they are out to beat the promise. Here is another outstanding demonstration by Homasote Homes of what the future holds for the building industry. For it is Homasote Precision-Built Construction, pioneered by Homasote Company in 1935—which makes it possible for Barrett & Hilp to accept with confidence a contract calling for the completion of 5000 houses in 5 months.

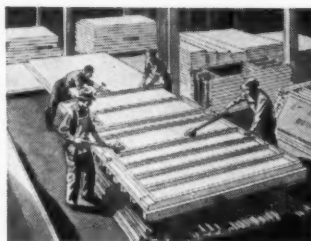
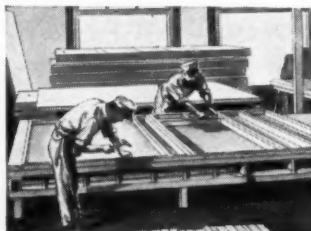
In war-time, the record this contracting firm is achieving is important. But it is the peacetime implications of what they are doing, which are vital to every builder. A new method of construction—thoroughly tried and tested—is coming into its own, and this new method means *new markets for you*. With it you will be able to supply top-quality homes to millions of Americans—at a price they can afford to pay, for the first time.

Homasote Homes are machine-perfect, doubly insulated; demountable, if desired. Yet they represent a new low in housing costs. They feature the use of 8' x 14' sheets of Homasote—the oldest and strongest insulating board on the market. These large sheets eliminate unsightly wall joints and batten strips, as well as the dangers of cracking and falling plaster. They provide *extra strength*.

Homasote Precision-Built Homes are built by mass production methods. But they are

not in any sense stock houses. They can be of any size or style, to fit the particular needs of your community. Moreover, they are built by local labor—of standard, quality materials purchased locally.

At present all our efforts are devoted to war work. At the end of the present national emergency, fabricating plants throughout the country will be ready to help builders supply new homes to a giant new housing market. Write today for details.



HOMASOTE COMPANY • • • TRENTON, N. J.

(Continued from page 77)

the job, we will tend to achieve the end of giving the ultimate consumer a better product on a more economical basis and at a more economical time cost on the job.

While there has been no spectacular advertising of the fact, one can see that this movement has been going on for some time and at an accelerated rate.

For instance, end-matching of yellow pine has tended to minimize the necessity of shipping specific lengths. At one time it was called "endless lumber." Probably a very large proportion of lumber in one and two-inch sizes is eventually used in much shorter lengths than the lengths in which it is shipped. This has resulted in almost a revolution in the last two or three years in the values of what we used to term "shorts." If, through co-operation all along the lines, mills can produce actual size and length lumber that is used in its entirety, cut to an exact length and an exact size without resawing or reworking on the job, we will be able to get more footage out of our trees; that is, more merchantable footage, and the consumer will have a substantial labor saving on the job, besides getting a better product. Of course, it will make a little more clerical work and brain work on the part of the intermediary influences; they will have to stop figuring piles all 10, 12, 14, and 16 foot lengths, and have piles for 2'2", 3', 3'6", etc., and merchandise their stuff more like a hardware store. They will also have to work on the architects and builders and designers to coordinate or modulate their plans; but the possibilities, in our estimation, are enormous.

Another thing that is only vaguely in mind now is the question of glued up stock, both laminated stock and plywood. Maybe we will all get to thinking more about these things as necessity forces us to do so.

EXCHANGE SAWMILLS SALES CO.

by F. R. Watkins, Secretary

Likes "Builders Quiz" Feature

Naples, Florida.

To the Editor:

I want to compliment you upon your Builders Quiz in your February number.

I hope you will continue this feature indefinitely and take in other fields of good house construction.

I can imagine nothing of greater service to the industry.

DAVID RITTENHOUSE SHOTWELL,
Registered Architect.

Barn Equipment Not Limited by L-41

Fairfield, Iowa.

To the Editor:

For your information, it is our opinion that barn equipment is not affected nor included in L-41.

As you may or may not know, we are already under a limitation order placed on the farm equipment industry. This is order L-26.

Therefore, our equipment is no different than when a farmer purchases a tractor, plow or any other implement included in L-26.

So if the equipment is available, we believe that a farmer can install \$2,000.00 worth of barn equipment without getting permission from anyone. And we believe he can build a new \$1,000.00 barn and put \$1,000 worth of barn equipment in it (if that is possible!) without securing a permit from anyone. In short, barn equipment is not considered building material but rather farm equipment similar to, as mentioned above, tractors, plows, combines, peanut pickers, etc.

This is information that should be put in the hands of building materials dealers without delay since it will be one way of increasing their volume.

A recent trip to Washington reveals that the administration is becoming concerned over the supply of food, especially milk, when compared with the ultimate demand. Washington is figuring on feeding 400,000,000 people.

Therefore, my impression is that farm equipment, including barn equipment, will fare no worse than it has to date.

Farmers just must have labor-saving, production-increasing barn equipment such as hay carriers, litter carriers, water bowls, stalls and stanchions if they are to produce the amount of milk necessary to feed 400,000,000 people. Especially do they need

it when over 40% of the available farm labor has been drafted by the army or by defense industries offering fabulously high wages with which the farmer can't compete.

There must be labor or labor-saving equipment. Farmers can't produce enough without both!

THE LOUDEN MACHINERY COMPANY,
R. W. Loudon, Vice President,
In Charge of Sales and Adv.

Proposes FHA for Farmers

Grand Junction, Colo.

To the Editor:

We believe you will be able to devise effective means for convincing Washington of the urgent need for a Farmers' FHA in order that farmers can not only produce but conserve—follow orderly marketing practices, etc.—and farm buildings do not require vital defense materials.

Here in Mesa County a most heartening precedent has just been established by the Farm Security Administration's "Food for Freedom" loans—one having been made for the sole purpose of buying the materials for a laying shed in the amount of \$300. The FSA through its regular loans can pretty well take care of the needs in this direction of the so-called low income farmers, and through their setup on FHI loans in experimental counties a most worth-while program is possible.

However, the compelling need for the great majority of other farmers is for an FHA setup. Farmers will not mortgage to build these things, and this fact might just as well be recognized—and anyone familiar with farming communities knows that a system of FHA character loans for farmers must be so contrived as to take the local banker into the program in some manner—this for a number of good reasons. These loans should be for homes as well—for instance, in discussing this matter with Joe Allen, banker at Eagle (past president Colorado Bankers Assn.), he started naming farmers there he knew would build under this setup and he would be most happy to handle this liquid long-time paper as outlined—and so it goes.

A made-work program of parks and roads after the war will be a sad thing if these roads must pass dilapidated farms. In January, 1941, the Mountain States Lumber Dealers Association adopted a resolution calling for a Farmers' FHA. This action gained support from every section of the United States. At any rate, Delta and Montrose counties have been recently set up as two of the three experimental counties in Colorado for an



"A GOOD HOME for LIVE STOCK TOO!" was the catchy title that ran above this advertising illustration in newspaper half page.

F.H.I. (Farm Home Improvement) program by the Department of Agriculture's Farm Security Administration. These experiments are among friends who wish them success, to the end that a sound way may be found, and become a national policy, which will provide good farmers (with a plan) a method of securing their acres, obtaining and maintaining proper improvements for their families, their stock, equipment and production . . . and farm life become truly attractive.

During this War Emergency, farmers are being urged to produce and conserve—not waste. Cows sheltered back of a barbed wire fence just do not get the job done, especially if they must drink cracked-ice water; hens that roost in trees or stuffy sheds cannot deliver the goods; implements stored under the sky deteri-

(Continued to page 80)

FEEDING
FLOORS

FACTORY
FLOORS



CONCRETE aids war production —factory and farm

Contractors can render real service by helping war industries build needed improvements with concrete because:

- Concrete conserves transportation—the bulk of concrete materials can usually be found locally.
- Concrete conserves critical materials; seldom needed in pavements, floors on grade and many other concrete jobs.
- Concrete "has what it takes" for war-industry buildings and repairs—strength, rigidity and fire-safety combined with economy of first cost and maintenance.

Concrete Contractors: Offer Your Services!

The contractor who "knows his concrete" can do his part today by showing food and war industry plants where concrete improvements will help speed war production. Many con-

tractors are helping farmers, too, by building concrete barn floors, feeding floors, milk houses, granaries and many other improvements needed to increase food production.

PORTLAND CEMENT ASSOCIATION

Dept. 5-3, 33 W. Grand Ave., Chicago, Ill.

Needed Concrete Improvements

Floors, foundations and footings • Loading platforms, ramps, teamtracks • Driveways, walks and steps • Machinery bases and pits • Concrete masonry walls • Pavement for storage yards and parking areas • Factory additions • Barn floors, other farm improvements

SUPPORT THE RED CROSS...BUY WAR SAVINGS STAMPS AND BONDS

(Continued from page 79)

orate rapidly, and so with feeds. The farmer needs adequate housing but to have that he must have adequate financing. This is a nation-wide problem. Material dealers have only their capital stock to work on. Much as they would like they cannot go further than their capital structure permits. The farmer must have the assurance of a period of years to pay for these capital improvements. We submit that farm loan companies should be induced to cooperate fully where capital improvements are necessary. Certainly this company will go as far as it can to meet needs and where credit requirements go beyond its means, our managers, informed of present agencies and future developments, should be able to help solve individual problems. Let's all boost for a set-up for farmers like FHA. Title 1 for the town-man—character loans—3 to 7 years—seasonal repayment. Then farmers can have their buildings without mortgaging.

CARL O. HENDRICKSON,
The Independent Lumber Company.

Stops Moonlight Reflection from Glass

THE UNITED STATES Office of Civilian Defense in its book on Blackout very pointedly makes this remark—"A factory may be well blacked out, but its glass windows, roof, wall and yard surfaces may reflect light of the moon, stars or flares very noticeably."

Specular reflection from mirror-like surfaces such as glass areas such as described above can immediately be neutralized or deadened by a new material devised by the Truscon Laboratories, Detroit, to which has been given the name of VD Glaze (VD stands for Visual Deception).

VD Glaze has the property of immediately blotting out reflection from specular surfaces. It may be applied to glass, steel, concrete, brick, terra cotta, over paint, etc.

A coat of VD Glaze applied to the car tops immediately kills all reflection as effectively as though covered with a blanket.

VD Glaze is made in a clear white translucent, designated as

"white sand," and tints. The tints are made to simulate the standard Army camouflage colors. That is to say, though the tints of VD Glaze are translucent and admit daylight, yet when viewed from the outside, the glass appears to be opaque. Thus, colors of VD Glaze can be selected to conform to the camouflage scheme used on a building to have the glass areas appear to be part of buildings or roof areas, or to merge into the surrounding terrain.

Stapling Hammers Speed War Building Program

A NEW automatic stapling hammer, offered by the Bostitch Company, East Greenwich, R. I., is now ready for service after more than five years of development and experimental work,

combined with hundreds of "on-the-job" tests in various parts of the country. Like other models of similar stapling hammers, the new "H-3" drives a staple in a single, one-hand blow, freeing the operator's other hand, adding inches to his normal reach, and eliminating necessity of holding tacks or nails in mouth or pocket—speeding certain building operations as much as 40 per cent or more. However, the new H-3, driving a larger, heavier staple than previous models, opens up a wider field of building applications, including fastening asphalt shingles on standard and plywood roofing, asphalt sidewalls, heavy insulation, built-up roofs, sound-proofing material, metal laths, wire mesh, and plaster board.



BOSTITCH H-3 stapling hammer.

Low Cost Homes Find the Answer

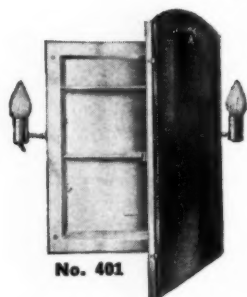
to BATHROOM BEAUTY and UTILITY IN

MIAMI CABINETS and ACCESSORIES

Miami produces beautiful and distinctive cabinets that are correct in size and price for low-cost homes. These models are just as outstanding, price for price, as Miami's finer creations.

Regardless of the price class, Miami Cabinets offer superior quality, more alluring beauty, more convenience features. And because this is true, more families are enjoying the luxury of Miami Cabinets than any other metal bathroom cabinet built.

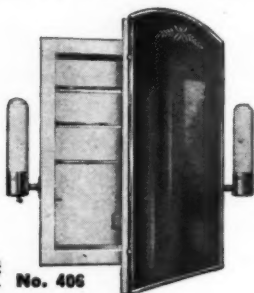
Whatever the bathroom cabinet problem—whether for public or private housing, for cottage or mansion—you'll find the better solution among MIAMI'S 140 lovely models. Architects and builders specify them by number. Write Dept. AB for catalog.



No. 401

FOR THE \$5000 HOUSE—An all-mirror front, electrically equipped cabinet with Colonial lights.

FOR THE \$5000 HOUSE—An all-mirror front, electrically equipped cabinet with semi-tubular lights.



No. 406

FOR THE \$3500 HOUSE—An inexpensive recessed cabinet, designed for the extremely low-cost home, cottage or bungalow. The mirror is set in a steel, white enameled frame.



No. 404

FOR PUBLIC HOUSING, SCHOOLS, etc.—Thousands of No. 210 recessed cabinets have been installed in Government and private housing projects.



No. 210

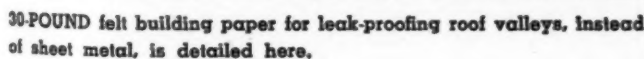
No. 403
FOR HOUSES COSTING FROM \$3500 to \$5000—Equipped with Colonial light bracket, light switch and electric convenience plug. Completely wired at factory.



MIAMI CABINET DIVISION The Philip Carey Mfg. Co., • MIDDLETOWN, OHIO

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ork,ing
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wire

"We are pointing our Association literature very definitely in the direction of suggestions for uses which may take the place of critical materials and toward war and farm use. Three recent data sheets are illustrative. One is a suggestion (shown here much reduced in size) for the use of redwood and building paper for roof valleys in the place of metal; the second, the use of milled redwood gutters and redwood downspout; the third, a built-up gutter suggestion which will permit the use of redwood gutters in localities in which moulded gutters are not readily available. Incidentally, this built-up gutter might well prove preferable even where moulded gutter can be secured due to economy and flexibility of design. We consider these gutter bulletins particularly timely and practical."



MILITARY authorities have not minced words in warning repeatedly that this country must be prepared to defend itself from air attack. The logical aim of war from the skies is the disruption of civilian and industrial life with consequent high-cost-of-interruption to production and morale. And the weapon which it is expected will be used most is the fire bomb.

The first step in preparing against such anticipated attack is a thorough check-up of fire fighting equipment now in place. Alarm and sprinkler systems and fire extinguishers are false promises of security unless they are ready for instant use when danger strikes. Alarming reports of the sabotage of fire extinguishers in different sections of the country emphasize the importance of regular check-ups and a 24-hour guard over all fire fighting apparatus. Factories, hotels, schools, department stores and many other industrial, institutional and commercial establishments are already

10



Protect yourself. You *must* meet certain Government limitations on heating plant output in new houses, or be denied critical building materials.

We must rush housing in the War Production Areas. The heating rulings must be met... but the builder must assume full responsibility for 70 degrees inside temperature at all times with the limited heater output. Without extra insulation there is no reserve heating capacity.

Blanket your houses with **full-thick Mineral Wool**. Make it your margin of security. It is only slightly beyond the minimum requirements in cost, but far beyond in results. And the better built houses, always bring better prices, sell quicker... are easier to rent... protect your reputation.

NATIONAL MINERAL WOOL ASSOCIATION

Rock Wool • Slag Wool • Glass Wool
1270 SIXTH AVENUE Dept. AB5, NEW YORK, N. Y.

Please send the following literature:

- ☐ "Recommended Practices for Installation of Mineral Wool"
- ☐ "Dollars saved by Margin of Security"

Name _____

Address _____

City _____ State _____

Business



"Look, a real Church Seat.
This house certainly has the best!"



Good builders build well, whether peacetime homes or today's defense construction. No wonder CHURCH SEATS stand high. In dwellings and factories, in camps, ships and bases, "The Best Seat in the House" is the choice by men who know. C. F. CHURCH MFG. CO., HOLYOKE, MASS.

Church Seats

SANI-BLACK • INDESTRUCTIBLE WHITE MOL-TEX • SHEET COVERED

(Continued from page 81)

equipped with approved fire extinguishers. They can be supplemented by buckets of sand and long-handled shovels. These are the common and safe weapons for fighting the light magnesium incendiary bomb effectively, as demonstrated in "Fighting the Fire Bomb," the training film approved by the Office of Civilian Defense.

As shown in the picture, there are two phases to the burning of the magnesium bomb. The first stage is the violent burning of the thermit igniting charge within the body of the bomb, when melted metal and flames spurt for several feet. During this active eruption, which lasts for about a minute, no attempt should be made to approach the bomb. It is important to watch and wait at a safe distance, especially since the bomb may contain an explosive charge which will go off during the thermit reaction.

This thermit reaction ignites the magnesium, which continues to burn quietly for ten to twenty minutes, if left undisturbed. In this second stage, the bomb can be approached closely and fought with water spray. At this point, extinguishers enter the picture.

All types of extinguishers discharging water or chemicals dissolved in water can be used directly on the bomb itself, if their normally solid streams are converted into a spray by "thumbing" the stream at the nozzle. These include the pump tank (with or without anti-freeze solution), the soda-acid, foam, loaded stream and gas-cartridge types.

The use of water spray serves two purposes. It speeds up the combustion of the bomb, so that it burns out quickly; it also serves to wet down the area around the bomb and restrict the spread of fire. It will ordinarily require two 2½ gallon units to dispose of one bomb and its surrounding fire.

A coarse spray of water helps control the burning bomb; a solid stream causes it to flare up explosively. The solid stream of the extinguishers, however, can be used on fires started by the bomb. Take care to keep the stream away from the bomb itself.

Although only water-filled and water-solution types of extinguishers are effective on the bomb itself, the vaporizing liquid (carbon tetrachloride base) and carbon dioxide types can be used on fires started by the bomb, just as they are used on fires started from any other cause.

If the bomb can be approached before it has set fire to its surroundings, dry sand can be used. The sand is shoveled over the burning bomb simply to cut down its radiant heat; sand does not extinguish the bomb. Covered with sand, the bomb can be scooped up in a shovel and dropped into a metal pail, in which a layer of several inches of sand has been placed. By running the handle of the shovel under the handle of the pail, to protect the hands from heat, the sand-smothered bomb can be carried from the premises and dumped where it will burn itself out harmlessly.

To use this fire fighting equipment with maximum efficiency, industrial workers must understand its operation. Approved fire extinguishers should be quickly available in any part of the structure, and every man on the job should know how to use them. Actual fire extinguisher drills are the most effective way to get the "feel" of an extinguisher.

Regular recharging of all fire extinguishers is part of the preparedness program. Frequent inspections are an added precaution against sabotage and give assurance that these protective units are in good operating condition, ready for immediate use.

How to Conserve Truck Equipment Through Preventive Maintenance

WITH THE GREATER part of America's truck production consigned to the armed forces, and with new trucks for civilian use scheduled for strict allocation, it becomes imperative that trucks now on the road be kept at their highest peak of efficiency and be made to last as long as possible.

Proper maintenance, and in particular, preventive maintenance, the "stitch in time" that corrects small troubles before they develop into larger ones, thus assumes even greater importance in the truck operations of every company whether large or small.

Various systems of preventive maintenance are employed by large trucking firms and by the different truck manufacturers. One of the most thorough and simplified that has come to our attention is that used by the Mack Company, Long Island City, N.Y., manufacturers of Mack Trucks.

This company's schedule of preventive maintenance incorporates an agreement whereby the owner brings his truck into the company's local branch shop at stated intervals at which time com-

petent mechanics inspect, check, tighten, adjust and lubricate the chassis for a small fee. After these check-ups, recommendations, if any, are made as to the need for minor repairs that should be attended to before they develop into something serious.

The inspection system used by the Mack Company can be applied to any make of truck and with the company's permission we are listing the necessary steps below for the benefit of any of our readers who may wish to adapt such a system to their own particular needs.

Mack preventive maintenance calls for periodic inspection at succeeding 1500-mile intervals, with special and more extensive adjustments at each succeeding 6,000 and 18,000-mile mark.

The 1500-Mile Interval Service calls for the following:

EVERY 1500-MILE PERIOD

ROAD TEST—For running condition and report defects.

ENGINE—While warm inspect for fuel, oil and water leaks, and tighten.

CRANKCASE—Change engine oil.

OIL FILTER—Replace if bag-type.

OIL PRESSURE—Check and report.

AIR FILTER—Wash in kerosene and oil.

FAN BELT—Check and adjust as required.

DISTRIBUTOR—One turn grease cup using BRB Grease (Ball and roller bearing grease).

GENERATOR—Add 8-10 drops light engine oil, or one turn grease cups with ball and roller bearing grease.

BATTERY—Check gravity. Add water. Clean and grease terminals.

CLUTCH—Adjust pedal free motion if necessary. Add BRB grease to release bearing if not prepacked. Add chassis-lube to yoke shaft.

TRANSMISSION—Add gear oil to level.

DRIVESHAFTS—Add gear oil to all open-type universal joints. Add short-fibre grease to slip spline. Add BRB grease to center bearing.

STEERING—Add gear oil to level of plug. Inspect drag link and drop arm, and add chassis lube. Inspect tie-rod, and add chassis lube. Add chassis lube to knuckles.

SHOCK ABSORBERS—Add chassis lube to links.



"KEEP 'em rolling," applies to trucks in civilian service, too. Preventive maintenance plans such as described here will enable your trucks to render many additional thousands of miles of uninterrupted service.

BRAKES—Add brake fluid to master cylinder to level.

REAR AXLE—Add gear oil to level.

NOTE—Add any other items peculiar to your particular chassis.

REPORT—Any items requiring attention.

The above check-up is made at each succeeding 1500-Mile interval. In addition, at the 6000-Mile period the following schedule is performed.

EVERY 6000-MILE PERIOD

REPEAT—1500-mile period schedule.

In Addition

CRANKCASE—Clean breather filter in gasoline, and oil.

OIL FILTER—Replace if can-type.

CYLINDERS—Tighten head stud nuts with tension wrench.

MANIFOLDS—Check and tighten nuts as required.

FUEL PUMP—Clean bowl (Renew diaphragm at 30,000 mile periods).

FAN BEARINGS—Add BRB grease.

DISTRIBUTOR—Adjust breaker points. Check and set advance if necessary. Check wiring and report condition.

SPARK PLUGS—Clean and set gap.

GENERATOR—Check and set charging rate as required. Clean and tighten terminals.

STARTING MOTOR—Add 8-10 drops light engine oil. Clean and tighten terminals.

DRIVE SHAFTS—Tighten universal joint flange bolts. Check tightness of hubs on shafts, and report.

(Continued to page 84)

Here's why WESTERN PINES* are unsurpassed for making KITCHEN CABINETS



These fine-grained woods are easy to mill and assemble with nails or glue. They dress smoothly. Hardware is quickly and easily applied. Drawers slide smoothly. Doors swing properly and fit snugly. Ideal for band-sawed valances. Smooth base makes for gleaming finish with paints or enamels. No defense restrictions on the production of these woods. It's a good time to push kitchen remodeling.

**The Western Pines will do
your next job better. Try them.**

WESTERN PINE ASSOCIATION

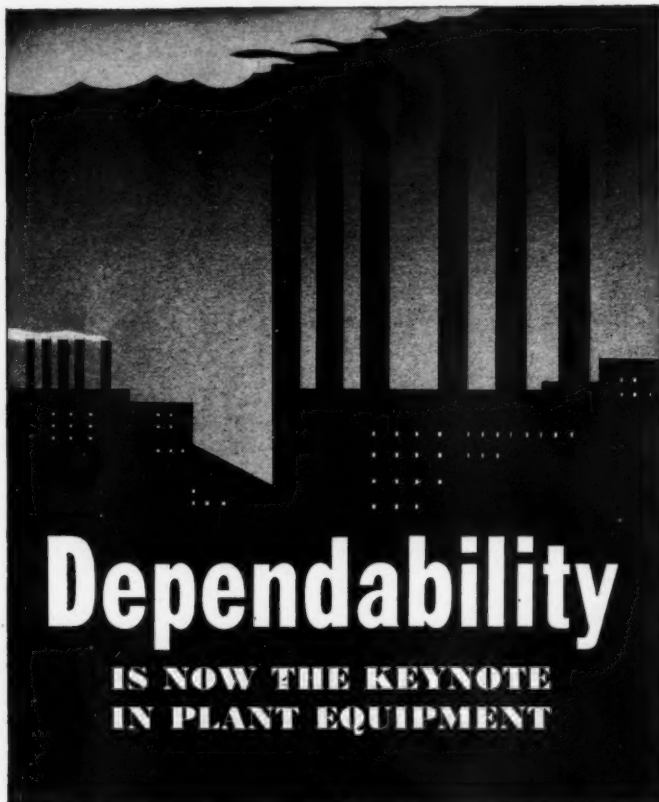
**Yeon
Building**



**Portland
Oregon**

*IDAHO WHITE PINE *PONDEROSA PINE *SUGAR PINE

—THESE ARE THE WESTERN PINES—



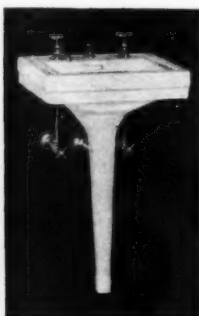
The Case plumbing fixtures now being installed and used in many Army, Navy and industrial projects provide the maximum of dependability—today's basic and primary requirement. Designed specifically for hard use, these fixtures are ideally suited for installation in the world's busiest washrooms. Their mechanical excellence and easy-to-clean surfaces of *vitreous china* are assurances of long wear, with a minimum of maintenance. And Case quality pays a dividend that is mighty important these days—in health protection for the men and women whose effort is vital to Victory... Distributors from coast to coast will gladly cooperate in serving you. W. A. Case & Son Mfg. Co., Buffalo, N. Y., Founded 1853.



No. 2335A CASCO Vitreous China Pedestal Type Urinal is durable and easy to clean.



Case No. 1600 Syphon Jet Flush Valve Closet Combination with elongated Bowl.



No. 700 WINDSOR Vitreous China Lavatory. Hooded Overflow, Anti-Splash Rim.

Case
DISTINCTIVE PLUMBING FIXTURES

(Continued from page 83)

SPRINGS—Tighten clip nuts. Inspect leaves and center bolt and report.
BRAKES—Add 2-oz. special light oil (low-pour test) to vacuum power cylinder.

REAR AXLE—Tighten stud nuts holding differential to banjo. Tighten axle drive flange stud nuts.

REPORT—Any other item requiring attention.

After the above schedule the 1500-Mile Interval Service is repeated until the next 6000-mile period and is then repeated again until the 18,000-mile period at which time the following schedule is fulfilled.

EVERY 18,000-MILE PERIOD

REPEAT—1500-Mile period schedule and 6000-Mile period schedule.

In Addition

CRANKCASE—Remove pan, and clean pan and parts.

ENGINE—Inspect and tighten supports if necessary. Check and tighten bell housing screws as required.

VALVES—Check and adjust tappet clearance if necessary.

COMPRESSION—Check each cylinder and report.

CARBURETOR—Clean thoroughly and adjust as required. Check and adjust fuel level if necessary.

COOLING SYSTEM—Flush, and inspect hoses and report. Drain cylinder block as well.

DRIVESHAFTS—Check and tighten center bearing lock nuts and frame bolts.

STEERING—Check gear and take up excess back-lash, if any.

WHEELS—Check and set toe-in if required. Remove wheels, and clean bearings. Repack bearings with short-fibre wheel-bearing grease and adjust for proper end play.

BRAKES—Wash vacuum power cylinder air cleaner in kerosene, and oil. Wash vacuum external valve air filter in gasoline, and oil.

REAR AXLE—Check end play in pinion bearing and report. Check for excess back lash and report.

REPORT—Any other items requiring attention.

After the above schedule has been performed the entire cycle repeats itself. It is claimed that in actual practice this "Preventive Maintenance Plan" has on numerous occasions proved itself as one of the surest ways of detecting minor troubles, which if left unattended would have resulted in breakdowns on the road with all the attendant expense and inconvenience.

Properly maintained, your present trucks will render many additional thousands of miles of uninterrupted service. Today it is not only good business to conserve your truck equipment through periodic inspection, but it is also good patriotism. For each in its own way, every truck on the road today is doing its bit in America's drive for ultimate victory.

Construction Glues Are "Stronger Than Nails"

MORE GLUING and less nailing is the trend in construction today; and it is speeding up building, at the same time lessening the industry's demand for nail tonnage.

Everybody knows today that the strongest way to fasten two pieces of wood together is with glue. In laminating plywood, in millwork, cabinet work, pattern making, etc., this fact has been proved conclusively... using modern water-resistant and waterproof glues.

What may not be so well-known, but has been equally well-established for a long time, is the valuable use to which especially formulated glues have been put in building construction... specified by leading architects and engineers, and approved in FHA and USHA housing.

It was the development by research chemists of I. F. Laucks, Inc., Seattle, Wash., a number of years ago of the self-bonding



feature, and of super-strength, water-resistance and waterproof qualities, that made Laucks construction glues products of prime importance to builders, contractors and prefabricators and brought them to their present commanding position in the construction field.

These Laucks glues, with their exclusive features, are being used daily from coast to coast in construction of stronger, more rigid walls, floors, partitions, arches, beams, and ceilings . . . utilizing modern engineering principles and so to build better buildings, more quickly and for less money.

Thousands of homes and buildings of various types . . . many in defense projects, as well as private construction . . . in the widest possible range of costs, building circumstances, and climate, are giving conclusive testimony to the wisdom of utilizing Laucks construction glues. A great many of these "glue-built" jobs are time- as well as use-tested, having been launched immediately after the specifications and principles were approved by U. S. Forest Products Laboratory and other Research laboratories many years ago.

Other Laucks products of special value for war industry housing in defense areas are: "Rez," synthetic resin sealer for wood, plywood, etc.; "Plasterez," synthetic resign plastic paint especially adapted for application on dri-built construction, prefabricated walls of demountable houses, etc.; "Rezitex," synthetic resin plastic paint for exteriors, especially adapted to application on exterior plywood, wall boards, etc.; "Laux Joint Filler," for filling joints and wallboard in plywood construction; "Lauxt看," economical plastic paint for dri-built construction; "Lauxlite," synthetic resin emulsion paint; meets Federal Specification TT-P-88 for interiors; and "Rezicote," synthetic emulsion paint for exteriors; meets Federal Specification TT-P-88.

Today Laucks factories are working overtime supplying this market. Thousands of wartime houses to shelter defense workers and soldiers have been built with Laucks construction glues. Thousands of others have been scientifically protected against weather, wear and decay with Laux Rez, synthetic resin sealer and primer. Thousands of others have been decorated with Laucks paint products.



PLYWOOD housing units, and dormitory (shown in view below and extending onto opposite page) at Bremerton, Wash., are examples of Laucks glued construction.



BUILDERS are now using Masonite* Cell-U-Blanket* insulation to convert idle attic space into comfortable, livable quarters. This improved type of blanket can be applied to roof rafters—from the inside—thereby bringing the attic within the insulated zone.

Masonite Presdwood* Products are also being used for finishing the attic . . . to provide smooth, durable hard-board walls . . . to afford extra living space at a time when there's urgent need for increased housing facilities.

- Cell-U-Blanket is light in weight—is easy to handle and quickly installed. It is just cut, applied and stapled to roof rafters.
- Cell-U-Blanket can't settle—won't shrink or sag. It provides a positive vapor barrier—is wind-proof and moisture-resistant.

Masonite Cell-U-Blanket is available through local lumber dealers in three thicknesses— $\frac{1}{2}$, $\frac{3}{4}$ and 1 inch (approx.); in six widths—for rafters on 12, 16, 20, 24, 33 and 38 inch centers; and in two types—either with asphalt-impregnated coverings on both sides or with a non-metallic reflective surface on the flange side. Mail the coupon below for free sample and complete details.

MASONITE

CELL-U-BLANKET



A new and better insulation — Sold by lumber dealers everywhere

MASONITE CORPORATION, Dept. AB-5
111 W. Washington St., Chicago, Ill.

Please send me a FREE sample and more information about Masonite Cell-U-Blanket Insulation.

Name _____

Address _____

City _____

State _____

*TRADE-MARK REG. U. S. PAT. OFF. "MASONITE" IDENTIFIES ALL PRODUCTS MARKED BY MASONITE CORPORATION. COPYRIGHT 1942, MASONITE CORP.



TO HEAT YOUR WAR HOUSES...



OIL AND GAS FURNACES

NEW low-cost "packaged" units —ready to install

These new, small G-E Oil and Gas Furnaces—available only for priority housing—are factory wired and assembled in one complete "package." They can be installed by any sheet metal contractor.

The smallest sizes occupy only $3\frac{1}{2}$ square feet of floor space and are approved by Underwriters' Laboratories, Inc. for installation with wall clearances of from 2 to 3 inches, depending upon type of unit.

Gas-fired units available in following capacities; 48,000, 72,000, and 96,000 Btu per hour output. Oil-fired units provide gross output of 60,000 Btu per hour and are available with either centrifugal or propeller fan.

...AND SPACE HEATERS



These new G-E oil burning space heaters—for priority jobs only—come in four capacities from 23,000 to 59,000 Btu per hour output. They provide high efficiency heat transfer surface, pan type humidifier and dial control at low cost.

For details: General Electric Co., Div. 2115, Bloomfield, N. J.

GENERAL  ELECTRIC

"Plasterbrick" Siding Material Renews Exteriors

PLASTERBRICK, an improved siding material developed by the Plasterbrick Corporation, Union Bank Building, Bethlehem, Pa., is primarily a patented process which fits today's conditions and war market needs in the building field.

It is FHA approved for low cost housing in defense areas. It takes the place of shingles or clapboard on frame houses and stucco on masonry construction. While the costs vary with each community, it is about the same as shingles, clapboard or stucco. Mr. M. S. Long, president, states that the parent company is handling the local Bethlehem contracts and is licensing the process to other contractors in other territories. "We concentrate on individual modernization jobs," he writes, "because it is more profitable. For instance, it costs us on an average of \$7.00 per one hundred square feet to resurface cinder block, concrete block or an old unpainted brick building. We sell it for around \$18.00 per one hundred square feet. (Average time required per house three days.)"

"On a frame building it requires metal lath and a scratch coat. Our costs are about \$15.00 per one hundred square feet. We sell it for about \$25.00 per one hundred square feet. (Average time per job six days.)"



OLD MILL remodeled into an impressive residence; new exterior of "Plasterbrick."

Armstrong Linoleum to Be Cotton Backed

ARMSTRONG's Marbelle Linoleum in both the Heavy and Standard Gauges will be produced in the future with a cotton backing instead of burlap, Kenneth O. Bates, general sales manager of the Company's Floor Division, has announced.

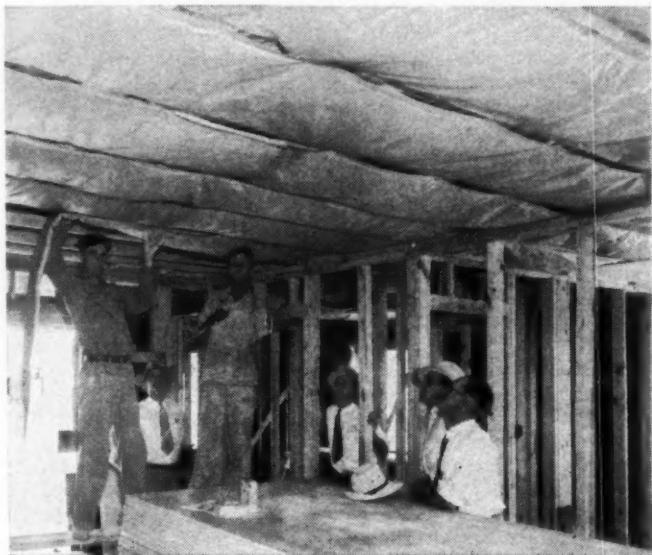
TRENDS in Home Equipment, Building Materials

New Defense Blanket Insulation

A NEW INSULATING blanket especially developed for defense construction has been announced by the Wood Conversion Co., St. Paul, Minn., manufacturers of Balsam-Wool Sealed Insulation. This new product—Defense Blanket—has been enthusiastically approved by builders of defense houses both for "on the job" use and for prefabricating purposes.

Defense Blanket, like Balsam-Wool, is a completely sealed insulation covered by a waterproof paper on both sides and is flanged on the edges for quick, permanent application. It is available in rolls or may be cut in varying lengths to fit job requirements.

Its light weight, ease of handling and low cost have made it very attractive material for defense houses of all types. Prefabricators find that it can be readily and securely applied in place at the factory and delivered on the job in first class condition. Contractors on the job find that it is equally easy to apply for their type of operation.



DEFENSE Blanket being applied at a Corpus Christi defense housing project. The flange is spot stapled in position, then lath is applied holding the flange tightly to the joists.

New Electric Cleaning Tool

THE AURAND Cleaning Tool, a portable hand tool offered by the Aurand Mfg. & Equipment Co., 2643 Colerain Ave., Cincinnati, is a new modern means for removing paint, scale, rust

and other accumulations on steel and other hard surfaces quickly and economically. It thoroughly cleans with a mechanical sand blasting effect.

Two cutter bundles containing loosely mounted cutters are revolved at high speed and centrifugal force causes cutters to be thrown outward and to strike and impinge the surface with an effective result.

This action uniformly cleans, without injury to the surface, as the cutter contact is regulated by an easily adjusted depth shoe.



NEW cleaning tool.

This tool is made in two sizes; a small model and a large model which can be obtained in either electric or pneumatic powered. A set of cutter bundles accompanies every tool and can be renewed.

GET A "PRIORITY" SALES APPEAL WITH TILE-TEX FLOORS and WALLS



Tile-Tex Floors and Walls in a Modern Kitchen

Today's conditions draw up a new set of specifications for both Builder and Buyer. Yet, despite pressure and "priorities," Buyers demand good value . . . and good Builders strive to deliver it. Whatever the Buyer may want in the way of color or decorative originality and long serving durability, Tile-Tex floors and walls provide. Front halls, kitchens, baths and basement playrooms done with Tile-Tex glow with sales appealing beauty.

To the Builder Tile-Tex presents unique and unequaled advantages. Here's a product with low first cost, plus speed of installation, plus maximum color and design appeal.

There is an approved Tile-Tex contractor near you who can show you Tile-Tex floors and walls in service . . . and show you how Tile-Tex can help you complete and sell new and remodeled homes. Write today for his name and copies of the new Tile-Tex booklets on Floors and Walls.

THE Tile-Tex Company CHICAGO HEIGHTS ILLINOIS

The Tile-Tex Company
Chicago Heights, Illinois

Send me complete literature on the following:

- ☐ "Floors That Endure" by Tile-Tex
- ☐ "Decorative Walls" by Tile-Tex
- ☐ "Flexachrome," an Exclusive Tile-Tex Product

Name

Address

AB-5-42

**"THERE'S NO JOB
TOO TOUGH FOR
A BOLSTER TYPE
STANLEY DRIVER!"**

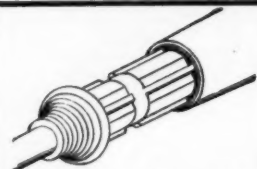
Here's how the bolster provides "built-in" strength and endurance



1. Blade tempered its entire length. Recesses are forged into butt end which is then driven into steel bolster.



2. Bosses are forced into recesses in blade, locking blade in bolster. Four wings are swaged on the outside of the bolster. Pyralin washer added for insulation.



3. Combined blade and bolster are driven into handle by hydraulic pressure. Long wings lock into hardwood handle so blade cannot twist.

STANLEY
Trade Mark

**No. 25
STANLEY
SCREW DRIVER**

You may seldom need all the rugged endurance that is built into a Stanley bolster type driver, but when you do, you know you can depend on it. Patented Bolster Construction positively locks blade in handle . . . prevents turning or twisting. Provides insulation and reinforces Driver against considerable pounding. Blades tempered entire length for extra strength. Tips accurately machine cross-ground to size for non-slip fit in screw slots. Hardwood handle fluted for comfortable grip. Satin black finish.

Your hardware dealer will supply you. Ask for a copy of Stanley Tool Catalog No. 34.



No. 45
Small blade—
parallel-
sided tip

Stanley Bolster Construction
is also available in . . .



No. 55
Small blade—
regular tip

STANLEY TOOLS

Division of The Stanley Works, 133 Elm St., New Britain, Conn.

THE TOOL BOX OF THE WORLD

New G-E Oil-Vaporizing Furnaces

TWO NEW compact, low-cost furnaces specifically designed to meet the needs of war housing applications have been announced by the General Electric air conditioning and commercial refrigeration department. Both are warm air furnaces of the oil vaporizing type and both are shipped factory wired and assembled ready for installation. These new units supplement the company's new line of "packaged" heating equipment previously announced.

The new furnaces, which are 20 inches wide, 22 inches deep, and 66 inches high, occupy about three square feet of floor space and have been designed to obtain low outside jacket temperatures. An important factor considered in the design of the units was the conservation of metals and many savings were effected, with the result that one unit weighs 210 pounds and the other only 160 pounds. This low weight, together with the compactness of the units, not only reduces freight and handling charges, but also simplifies and speeds installation.

One furnace, suitable for either basement or utility room installation, is equipped with a centrifugal fan. It has a supply outlet at the top and a return duct outlet at the bottom. No filters are supplied, but they could be applied to this model if they were desired. The gross output of the unit is 60,000 Btu/hr. and its bonnet output is 53,000 Btu/hr. The bonnet air flow is 530 cfm. This is, of course, the lighter unit weighing only 160 pounds.

A mechanical draft fan is standard equipment on both models. The units also come complete with oil control valve, fan control, limit switch, draft regulator, and single range thermostat. The oil rates of the furnaces are 0.10 gallons per hour minimum and 0.61 gallons per hour maximum.



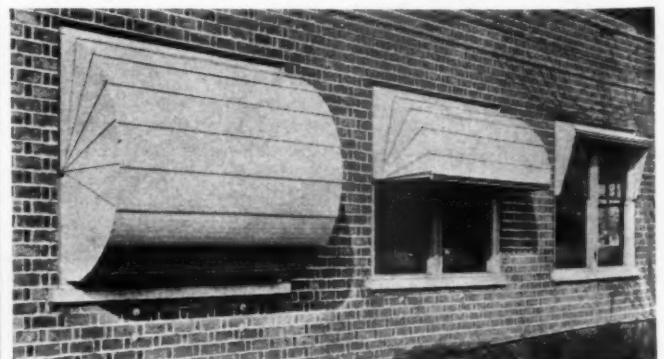
NEW G-E oil heater.

New Meta-Fold Blackout Awning

A NEW ANSWER to the blackout problem for industrial, commercial and residential buildings is seen in the introduction of the "Meta-Fold," metal, blackout awnings, designed and manufactured by the Acklin Stamping Co., Toledo, Ohio. These sturdy metal awnings are installed on the exterior of the building, are operated like an old-time roll top desk. For sunlight protection, the metal awning can be lowered half-way. For complete blackout, the awning is fully lowered. It has been designed in segments that nest together in a telescopic manner. Each segment is sealed by a light-proof, noise-absorbent gasket. The entire awning is said to be rust-proof and fire-proof, and can be provided with an inside lock.

For many years a standard metal awning for peacetime protection against the sun has been manufactured. However, with the arrival of the wartime emergency, this new "blackout awning" was promptly developed for use on defense plants, army camp barracks, mess halls, hospitals, hotels, civilian homes and other types of buildings which require blackout facilities.

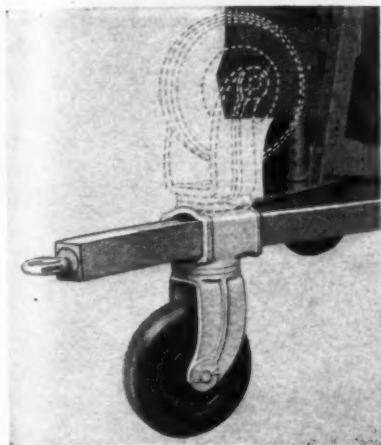
All "blackout awnings" are manufactured by this company to individual specifications, and are furnished in several neutral non-glare colors.



"META-FOLD" sunshade and blackout awnings.

CMC Announces Swivel Third Wheel for 2-Wheel Trailers

AS OPTIONAL equipment on CMC Mixers, Construction Machinery Company, Waterloo, Ia., is now offering a third wheel or caster for two-wheel trailers. This equipment is available for CMC Mixers now in the field and offers important time and labor-saving advantages.

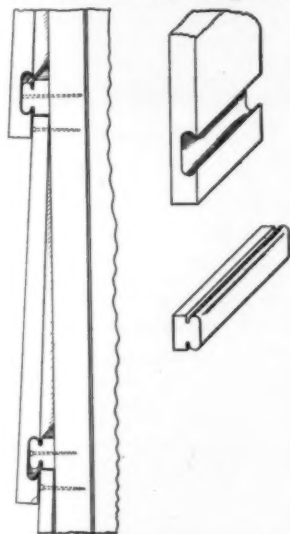


CMC swivel third wheel for two-wheel trailers.

This handy third wheel is equipped with valveless pneumatic puncture-proof tire—runs on roller bearings, and the bracket is made of heavy malleable iron. It is quickly reversed on the tongue and turned up out of the way when not in use, making it far easier to move and handle mixers on the job. This is one of many improvements offered in the CMC Line of mixers this year.

Lap Siding Wind Seal Offered

THE METHOD of nailing siding every 16 inches or 2 feet leaves a crack along with each nail, especially after the sun, wind and weather attack the siding. To correct this, H. T. Seymour, Easton, Md., a practical carpenter and builder of long experience, has invented a new method of attaching the siding. He uses a "Lap Siding Wind Seal Strip," as illustrated in patent drawing herewith. With this "Wind Seal" operation the siding is double fastened, being nailed at the top and secretly fastened at the bottom, giving double strength. The wind seal strip is so constructed as to give the desired lap for bringing siding in proper position under windows and doors. With this operation there are no exposed nail holes. Having no nail holes to punch and none to prime for putty and no putty to be placed on siding, then there are none to replace and none to fall out, no nail holes to rot and no siding to get loose and fall off.



BEVEL siding is grooved to interlock with nailing strips.

Celotex Offers 1/8-inch Asbestos-Cement Board

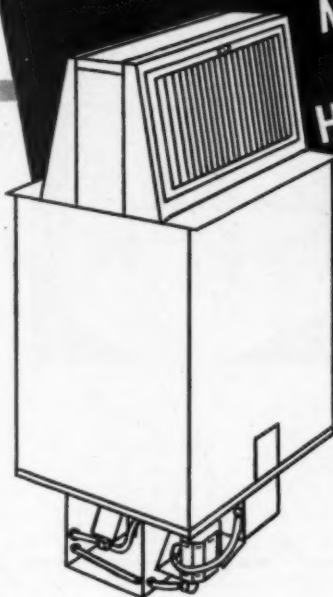
AN ASBESTOS-CEMENT board of the type being used extensively in army cantonments, and naval bases, ordnance and industrial plants has been added to its building material line by The Celotex Corp., Chicago, according to Marvin Greenwood, general sales manager. It is being manufactured at the corporation's Metuchen, N. J., plant, where production facilities for this type of product have been tripled. It will be distributed through New England and the Middle Atlantic states.

The board is a rigid, hard, non-combustible product with a smooth, even surface, affording good light reflection, and is a pleasing light gray color. It is available in three thicknesses— $\frac{1}{8}$ inch, $\frac{1}{4}$ inch and $\frac{3}{8}$ inch. It comes in two standard sizes—4 x 4 feet and 4 x 8 feet.

The board is applied with nails or screws direct to wood sheathing. Screws or bolts are used for attachment to steel framing. It may be painted if desired.

THIS OIL-BURNING FLOOR FURNACE

Meets Your
Defense
Home Heating
Needs



There are seven reasons why the oil-burning H. C. Little Floor Furnace will fit your requirements for low-cost heat in small defense homes:

1. LISTED by the UNDERWRITERS' LABORATORIES — for cheap No. 3 furnace oil (27° Diesel).
2. O.K. for F.H.A. FINANCING. Thousands already installed on F.H.A. terms.
3. TWO SIZES — The No. 70-41 has a 47,250 B.T.U. Output — The No. 100-41 has a 75,000 B.T.U. Output.
4. TWO STYLES — Single (flat) register or dual (wall) register models.
5. TWO TYPES OF CONTROL — (a) Manual lighting, or (b) Electric Ignition with Automatic Control.
6. CLEAN BURNING — No Pilot Light to smoke, no soot or hard carbon.
7. DEPENDABLE — Many H. C. Little Floor Furnaces have been in continuous use over nine years, with satisfactory results for their users.

Mail this coupon today

**H. C. LITTLE
BURNER
COMPANY**
San Rafael, Calif.

Please send complete data on your oil-burning Floor Furnace.

Name _____

Address _____

City _____ State _____

Warehouse Stocks and Direct
Factory Representatives in Boston,
Newark, Baltimore, St. Petersburg,
Aurora, Ill., Seattle and
Portland, Oregon.



Whether you are building, remodeling or rehabilitating to provide additional living quarters for war production workers, you will want to use a YPS Cabinet Sink.

YPS Cabinet Sinks are produced by America's leading manufacturer of PLANNED KITCHENS. However, for the duration, the steel that was used for cabinet sinks and wall and base cabinets is now going into war materials. Only the cabinet sinks that are already manufactured are available, and these can only be released for War Production Workers' Homes.

When Victory comes, the kitchens where YPS Cabinet Sinks are installed can be equipped with the additional cabinets to make them beautiful YPS PLANNED KITCHENS.

YPS Cabinet Sinks give the builder these advantages:

- easy to handle
- quickly installed
- factory finished — no painting necessary
- nationally advertised

Housewives like YPS Cabinet Sinks because:

- they are comfortable to work at—plenty of knee and toe room
- they save hundreds of steps every day
- they are easy to keep clean

YOUNGSTOWN PRESSED STEEL DIVISION, Dept. AB-542

Mullins Manufacturing Corp.

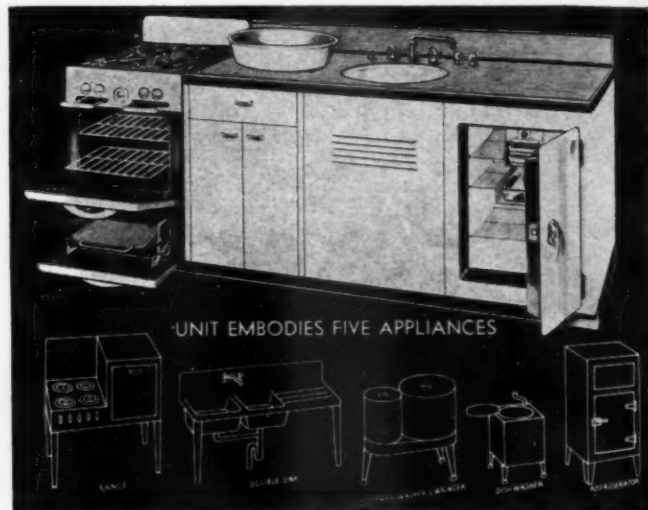


Warren, Ohio



Answer to Modern Low-Cost Kitchens

SOME TIME ago OPM proposed that industry produce "streamlined low-cost products without frills." In answer Robot Appliances, Inc., Industrial Bank Bldg., Detroit, is producing compact, modern, low-cost kitchens, which make it possible to have electric or gas for kitchen appliances that are uniform in height and depth. The Robot Unit Kitchen combines: Robot Duo-Sink of unusual design that includes a sink and tub which may be utilized as a dishwasher or clotheswasher and wringer, gas or electric range, gas or electric refrigerator, gas or electric water heater, and wall and base cabinets of steel or wood. The individual Robot Appliances are so designed that Mrs. America can purchase one appliance at a time and eventually own a uniform, complete modern kitchen, it is said.



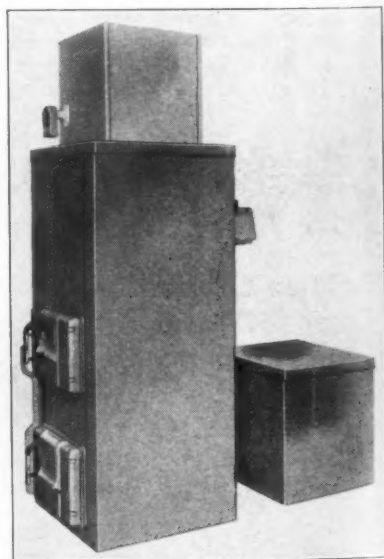
ROBOT appliances for compact kitchens.

Furnace and Blower Unit for Defense Homes

THE DOWAGIAC Steel Furnace Co., Dowagiac, Mich., has developed a compact unit that is being extensively used in the government housing projects; the model number is PBA-18. Day and night production lines have made this unit available for quantity use. Since early fall daily shipments have gone forward for PBA, USHA, etc., applications, where they meet the demands for effective yet strongly competitive equipment.

The PBA unit meets government specifications and adds a specially designed smoke outlet compartment with reversible check damper that requires no assembly. Its appearance is enhanced by the regular "Dowagiac" streamlined, piano hinged doors with chromium trimmed handles, and with the preferred grey enamel finish on sturdy casings, including the plenum.

The unit is priced to command consideration whether with hand or metaphram controls. It is available for defense projects only and shipments can begin within ten days from the time materials are received through any priorities supplied.



DOWAGIAC'S defense housing unit.

Modern Design Saves War Materials

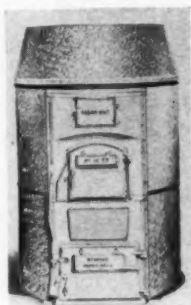
MODERN design of home-heating equipment has made possible sensational savings in critical war materials while providing better heating service, Paul B. Zimmerman, vice president and general sales manager, Airtemp Division, Chrysler Corporation, has revealed.

"Four homes," he said, "can now be supplied with efficient heating equipment using no more metal than formerly was required for one. With the new Airtemp Vapor-flame Furnace and recently developed non-metal ducts, a central heating system can be provided requiring as little as 253 pounds of metal."

To illustrate, Zimmerman compared the amounts of metal required to manufacture each of three types of furnaces of the size needed for a five-room defense home. A cast-iron, coal-fired furnace requires 915 pounds of metal; a steel, coal-fired unit takes 648 pounds; while the steel, oil-fired Vapor-flame Furnace uses only 253 pounds of metal. Thus, the Vapor-flame saves 395 to 662 pounds of critical war material.

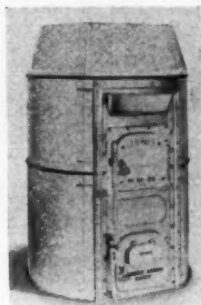
An additional saving of around 300 pounds can be made by the use of asbestos or composition ducts in place of sheet metal, so that as much as 962 pounds of metal is conserved by a single modern installation.

Cast Iron
Coal-Fired Furnace



915 lbs.

Steel
Coal-Fired Furnace



648 lbs.

Steel
Oil-Fired Furnace



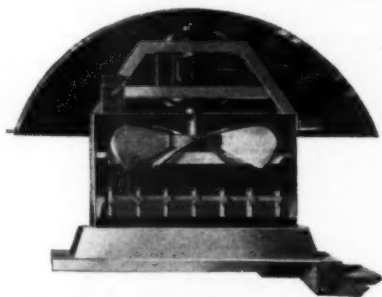
253 lbs.

ABOVE weight comparison shows that the oil-fired Vapor-flame model saves 662 pounds over the cast-iron, coal-fired unit, and 395 pounds over the steel, coal-fired furnace.

Trane Blackout Ventilators

HERE IS positive ventilation designed especially for blackout plants and for all buildings erected in the modern wartime blackout type of construction—buildings in which work must be carried on despite the possibility of air raids.

Trane Blackout Ventilators, developed by the Trane Company, La Crosse, Wis., provide this positive and economical ventilation. They meet a vital need created by the present huge program for industrial building expansion which has produced two considerations requiring changes in the usual practice of ventilation.



SECTIONAL view of Trane electric roof ventilator.

In the first place, immense structures of great floor areas running into acres require positive ventilation because the normal infiltration of outside air from windows, doors, and outside walls is lacking, and the roof areas provide a solar heat load which maintains the temperature of the occupied space far above the outside temperature.

Secondly, the very nature of modern warfare has demanded that ventilators be designed to meet conditions imposed by a "black-out." This means that ventilators must be light-proof as well as weather-proof—advantages possessed by Trane Blackout Ventilators which are available in three basic models: 1. Exhaust Unit, (Continued to page 92)

SISALKRAFT



... FOR A
**TIGHT
WALL**

... Never More Essential Than in LOW-COST HOUSES

If ever a thoroughly tight, windproof side wall is needed, it's in the "Under \$6,000" bracket — where cost limits the materials used, and size of heating units is sharply restricted.

SISALKRAFT assures a watertight, windtight weather barrier, free of tears or punctures. Its great toughness permits rapid, undamaged application without waste, and keeps the applied cost well in line. Try SISALKRAFT on your low-cost houses and see how perfectly it fills the bill! Write for samples and data.

THE SISALKRAFT CO., 205 W. Wacker Drive, Chicago, Illinois
NEW YORK SAN FRANCISCO



"Being
Our Part
in
Production
for Defense"

THIS MARK MERITS YOUR CONFIDENCE

Bennett fireplace construction equipment may cost a little more, a difference that smart builders gladly pay to get reliable service on better built products!

BENNETT FRESH AIR UNIT

In many cases, particularly in small, tight homes, the Bennett Fresh Air Unit is the only sure way to prevent smoking. And, where application requires a recirculating type unit, again you'll find that Bennett means "best"! Nearby warehouse stocks assure prompt delivery . . . you get the goods when you want them!



BENNETT
FIREPLACE COMPANY

542 MARKET ST., NORWICH, N. Y.

Write for
FREE Catalog!

How To Sand Floors One-Third Faster— —Use AMERICAN

Finishing two houses a day instead of one and one-half doesn't sound like much, but remember, if you are sanding floors in one thousand homes with American High-Speed Standards, defense workers are moving in on those finished floors, when with other machines, two hundred and fifty dwelling floors would still be incomplete.

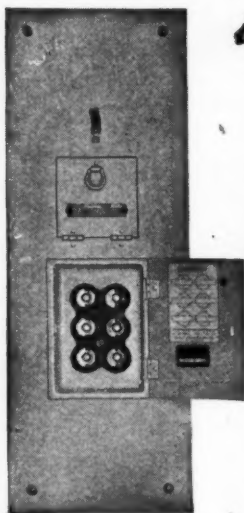


Whether you are refinishing four rooms in a bungalow or sanding two million and a half feet of flooring on a huge defense job, you can do more work better in a shorter time. The American method of drum-control, sustaining device, automatic voltage selector and a motor with "horse-power plus" are just a few reasons why the American Standard will do your sanding faster. Let us prove this with an on-the-job demonstration.

Write today for complete description, circulars and prices on the American line of floor sanders.

**AMERICAN
FLOOR SURFACING
MACHINE CO.**
511 South St. Clair St.
TOLEDO, OHIO

Here's Safety— in an attractive package



Ⓜ 6-Circuit Safety-type Service Equipment, with 60 Amp. Tumbler Main Switch and Fuse. Bell Transformer space optional.

—service equipment adapted to the requirements of the modest bungalow—or of the most elaborate house.



**FUSE
SERVICE
EQUIPMENT**

contributes to the low cost of good construction. It is designed to give maximum protection. The box is of galvanized steel. The front, with its pearl gray lacquer finish, is neat and unobtrusive, and easily kept clean. Each unit is compact and pleasingly designed... Main switch and distribution circuits are combined in one unit. Space for bell transformer optional.

Capacities: 115 volt, 2 wire, or 115-230 volt, 3 wire. Available with from 2 to 20 circuits.

There is a Wholesaler near you

who carries Ⓜ Fuse Service Equipment in stock, for quick delivery. Write us for his name and address.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

(Continued from page 91)

2. Summer Supply Unit and 3. Winter Supply Unit.

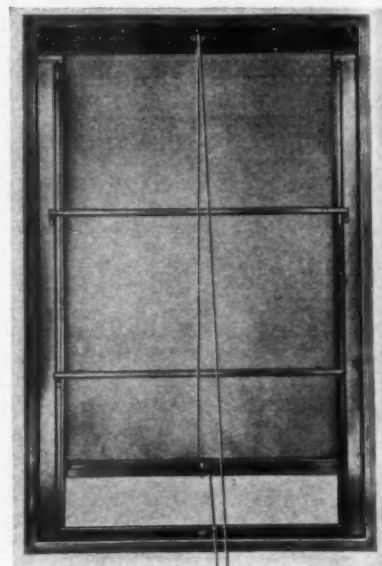
The Summer Supply Unit is designed to provide large volumes of outside air with perceptible air motion at all times. It is a positive means of introducing fresh air for ventilation and for reducing the solar heat gains. The use of a unit of this type is generally found necessary in the case of large industrial plants or where ventilation for particular industrial processes is needed. Conventional types of diffusion outlets may be used.

Higgin Blackout Shades

WINDOW shades are in war-time service. They have been drafted from their original peace-time purpose to help blackout vital defense plants, institutions and buildings. If air raid alarms should sound, these special blinds will aid in maintaining high speed production.

The shades were designed originally to keep light from filtering into photographic dark rooms and technical laboratories. Now they are being utilized to prevent interior lights from showing outside. When enemy raiders cannot spot lights, they naturally are hampered in finding their objectives.

A large new East Coast airplane factory has just equipped its sawtooth monitor skylights and side windows with these black artificial leather shades and sheet metal fixtures.



HIGGIN blackout shade.

The huge order of hand- and motor-operated shades makes possible a complete plant blackout within five minutes after an alarm. An A-1-C priority enabled Higgin Products, Inc., Newport, Kentucky, to obtain the required 18 tons of Armco galvanized mill-bonderized sheet through the Cincinnati Steel Products Company.

Many Army camp X-ray rooms, municipal, state and federal institutions are equipped with similar roller or crank-operated shades. As the two-ply coverings unroll they pass through metal channels that fit tightly against the window frames. Two braces drop across the shades to prevent flapping or moving in drafts. Bottom bars engage sill locks. Interlocking strips seal all points where metal parts join. Three coats of baked enamel cover the metal sections. When the shades are not in use they are housed in metal containers that protect them from dirt.

Even when windows are broken by concussion the shades remain stationary and light-proof. The manufacturer says the long-term cost is less than for the electric power required to illuminate and air condition a "black-out" plant. When the war is over the cost of the fixtures can be written off.

Tack-up Wallpaper Is Popular

FLEMING & SONS, Inc., Dallas, Tex., has brought out a new decorated building paper, which is sold under the trade name "Wallrite." This is strictly for inside use, as wallpaper. However, it combines the insulating properties of heavy sheathing paper, with bright floral and other wallpaper designs, at a cost lower than painting.

In addition, its heavy weight and strength make it possible to tack up, instead of pasting. This makes it a quick, inexpensive and convenient material for use in low cost remodeling, or in any other low cost interior finishing, especially over lumber inside walls. No felt or canvas is required. It is manufactured in 36-inch width, and in a variety of brilliant patterns. Colors are smear-proof; can be wiped clean with a damp rag.

During the past year, Fleming & Sons brought out "Match-Taks," colored tacks which exactly match the pattern colors

of the Wallrite. They are virtually invisible 3 feet away. Wallrite and Match-Taks have taken the South, where clapboard, interior walls predominate among lower middle and lower income homes, by storm.

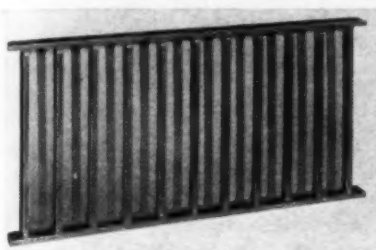


In fact, this has become a steady and high-turnover item for lumber, hardware and building materials dealers everywhere it has been introduced, particularly where board walls are common.

MODEL applying Tack-up wallpaper by using colored Match-Taks.

New Screened Bar Type Foundation Grate

TO CONTRIBUTE to defense housing requirements comes the announcement from the Majestic Co., Huntington, Ind., of a new screened bar-type foundation grate.



This new unit consists of two adjacent rows of alternately spaced vertical bars. The two rows overlap each other slightly providing what is substantially a single, closely-spaced staggered row. A heavy galvanized screen is then threaded between these two rows of bars to prevent the

admission of insects, dirt and other foreign objects. The grate is formed of a high quality cast semi-steel and is made in three sizes: 8x8, 8x12, and 8x16 inches.

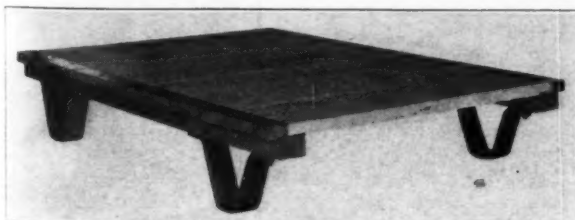
Yale Introduces Timber-Lock Platform

THE Yale & Towne Mfg. Co. has brought out a skid platform, called the Timber-Lock—a platform that by virtue of its design uses no steel in the frame yet gives all the strength inherent in steel welding. It is made of specially selected tough oak—and is so constructed as practically to defy breakage. A good part of this strength is traceable to a new interlocking "wood-weld" process to tie supporting leg runners and deck boards into one unit.

Instead of just placing the platform deck on the supporting leg runners and nailing, deep cut grooves run along the entire length of the platform deck boards. Into each of these grooves, the supporting hard oak leg beam is tightly fitted—thus interlocking platform and beams in a vise-like grip that completely eliminates rocking, shaking and other forms of instability.

Legs are of high grade formed steel bars, joined to the leg beam by heavy forged steel bolts. Washers on top and bottom of the bolts guarantee rigid clamp. Also, the large diameter steel washer under leg bolt heads provides wide bearing point and insures increased leg stability.

The Timber-Lock is available in all standard widths and lengths, plain or armored end. Also, vertical or standard leg design; four or six leg construction.



TIMBER-LOCK skid platform by Yale & Towne.

For ALL double-hung window construction...



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WRITE for descriptive literature, specifications and window detail drawings. Pullman Manufacturing Corp., Dept. A-5, 1170 University Ave., Rochester, N. Y.

Specify **PULLMAN** *Sash Balances*



TIME • LABOR • MATERIALS TRIMPAK HELPS SAVE ALL THREE

Right now, when it is so important to avoid waste, Trimpak helps you *save* time, labor, and materials.

Trimpak's new lock-joint mitred trim saves 44% installation time—releasing important labor for defense. Trimpak saves transportation, too, by leaving the waste trim at the mill.

Trimpak is America's finest quality packaged window and door trim. It is precision cut, to assure perfect joint and is delivered to the job in strong cartons ready for installation.

Investigate Trimpak today at your local lumber dealer. For literature write direct to Dept. AB-5, Trimpak Corporation, 44 Whitehall Street, New York, N. Y.

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TECO TIMBER TRUSSES *Go to Chapel!*

This Army Chapel, one of 604, is typical of small, wood churches found in many American communities.

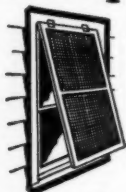
TECO Timber Trusses, spanning the 37'x81' auditorium, support the roof and add a churchly note to the interior decoration. For complete information about the TECO System of Timber Construction and typical designs for large and small structures—write us today.



The TECO Ring Connector spreads the load on a timber joint over practically the entire cross-section of the wood.

Timber ENGINEERING CO., Inc.
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—to give them even greater durability, laboratory research has developed minimum standards of toxic preservation. Such treatment assures purchasers of long-standing and satisfactory service, even under the severe requirements of modern construction.

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McCORMICK BUILDING - CHICAGO, ILLINOIS

Seal of Approval—The Identification of a Product Meeting N. D. M. A.
Preservative Minimum Standards



FOR FURTHER INFORMATION SEE OUR CATALOG IN SWEET'S

New "Sunbeam" Winter Air Conditioner

THE AMERICAN Radiator & Standard Sanitary Corp., Pittsburgh, announces a new heating plant for defense housing, the "Wyandotte" Winter Air Conditioner. It is designed for hall, closet space or other first floor locations. It meets specifications of various governmental agencies. Its special points are:

1. HEATING ELEMENT AND RADIATOR—constructed of durable heat-resisting steel. Spacious for greater efficiency. All seams are welded leak-proof.

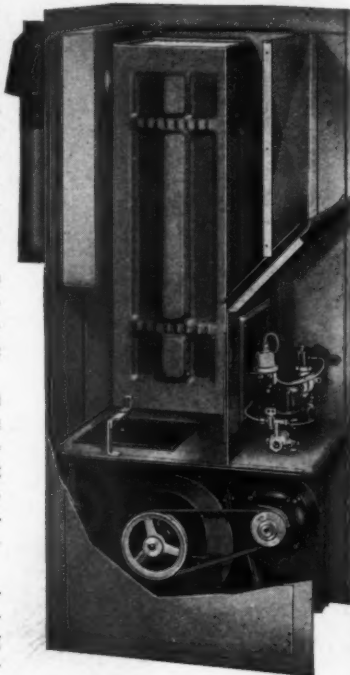
2. JACKET—has slip joints for ease in assembling. Finished in beautiful Placid Blue with suede texture.

3. CONTROLS—main shut off valve; pressure regulator; gas valve; automatic pilot; blower-limit switch and plain thermostat are standard equipment. Two control combinations are available.

4. BLOWER AND MOTOR—blower is double inlet type with self-aligning bearings. Motor is especially designed for winter air conditioning installations. Has overload protective device.

5. RETURN AIR—can enter unit from three different positions; front, right or left side. When air is taken in either side, cover plate is removed from the side to be used and installed over grille in front.

6. FILTER—a 16" x 20" filter with rack, for installation in either side opening, is available at slight additional cost.



CUTAWAY view of new
"Wyandotte" heater.

"E-Z-Glaze" Puttyless Barn Sash

THE FARLEY & LOETSCHER Mfg. Co., Dubuque, Iowa, has met the war market for farm production buildings by developing a new puttyless sash for brooder houses, poultry houses, garages, cabins, cottages, machine sheds, hog houses, milk houses, etc. It is known as the "E-Z-Glaze" Puttyless Barn Sash. These sash are made of clear W. P. Pine—rot and termite proofed and completely aluminum primed.

Through mortise and tenon construction (no slip tenons), securely pinned, accurately machined, bars tightly coped and smoothly sanded; water drip on top rail and cross bars. The cross bars and bottom rail are pitched on the outside for good water drainage.

No complicated fasteners, thumb screws or other cumbersome devices are used to hold the glass in place, yet re-glazing can be accomplished instantly without the use of a single tool. To re-glaze the Qualitybilt "E-Z-Glaze" Puttyless Barn Sash simply slip a light of glass into the vertical groove—slide and press glass firmly into the plow, permitting it to spring into the opposite groove. "E-Z-Glaze" provides the quickest and most inexpensive method of glazing.



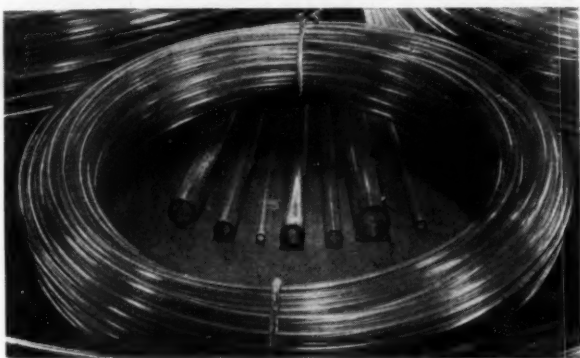
GLAZING is simple
in puttyless sash.

Tenite Tubing Available

TRANSPARENT Tenite tubing in sizes ranging from 3/16" to 3/4" in diameter is now available for immediate delivery. It is a seamless tubing extruded in continuous lengths, and possesses many advantages not found in other type tubings.

This new plastic tubing is virtually unbreakable and may be readily bent, formed, or curved to fit almost any condition. Troublesome weld marks and joints are eliminated in the fabrication of Tenite tubing. The ends may be easily adjusted to standard flared fittings with the same tools that are used for copper tubing. Large diameter tubing, with wall thickness of .0625", can be threaded with standard thread-cutting tools.

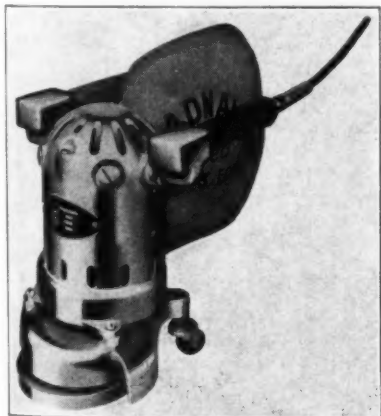
Tenite tubing in sizes up to 1/2" in diameter, with wall thickness of .035", is stocked in long length coils such as are shown in the illustration. Tubing over 1/2" in diameter is stocked in 12' lengths. 1" diameter tubing is expected to be available for delivery shortly. This transparent tubing is extruded by Extruded Plastics, Inc., Norwalk, Conn., from a cellulose acetate butyrate formula of Tenite, produced by Tennessee Eastman Corporation, Kingsport, Tennessee. The tubing is distributed by Julius Blum & Co., Inc., 532 West 22nd St., New York, N.Y.



TRANSPARENT Tenite tubing.

New Dreadnaught V-Speed Edger

THE CLARKE Sanding Machine Co., Muskegon, Mich., announces a compact edger, designed to reach easily what are otherwise difficult or inaccessible places.



The manufacturer states that though light in weight for easy handling, this Dreadnaught V-speed edger is ruggedly constructed and so engineered that it will last for years with a minimum of attention. It has a 3/4 H.P. specially constructed universal motor, which makes it a real "work horse" under continuous production.

NEW Clarke edger.

New Wood Finishing Guide

"AN IDEAL Finish for Plywood" is the title of a new folder by the O'Brien Varnish Company, South Bend, Ind. It describes the procedure and advantages of finishing plywood, particularly fir plywood, with O'Brien Pen-chrome "Blonde" Wood Finishes. The Pen-chrome finish is obtained in three coats at very low material and labor cost. It combines the light, pleasant tints obtainable with paint and the easy maintenance of natural wood finishes. It is particularly attractive to users of fir plywood in dri-wall construction because the need for expensive joint treatment is eliminated, the finishing cost is low and the natural wood effect obtained tends to obscure any "checking" which may occur after the wood has been in use for some time. A copy of this folder, along with a complete description of the Pen-chrome line and colors may be obtained by writing the O'Brien Varnish Company.

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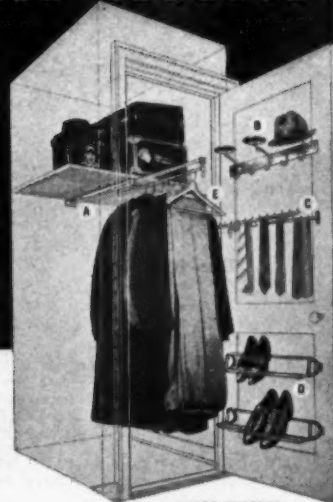


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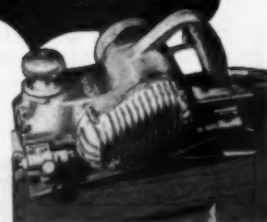
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PLUG IT IN

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Equipped with either 110 or 220 volt universal motor for 60, 50 or 25 cycle.

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**SAVE
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for DEFENSE**

Faster building schedules and fewer trained hands make MALL Planes indispensable in fitting transoms, doors, sash, screens and doing other planning and jointing jobs. They are 10 times faster than the old-style jack plane—leave a smooth surface with or against the grain and can be adjusted from 0" to 1/8" depth cut while in operation. They are perfectly balanced and have comfortable handles and removable beveling fence for door work.



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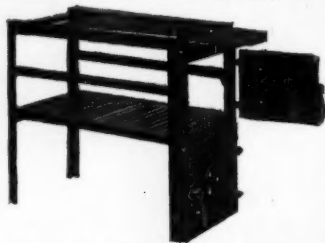
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Majestic

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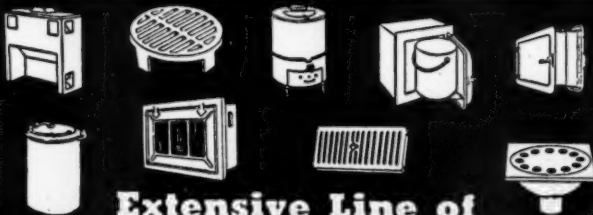


*Demand Swells
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THE MAJESTIC CO. 854 ERIE STREET
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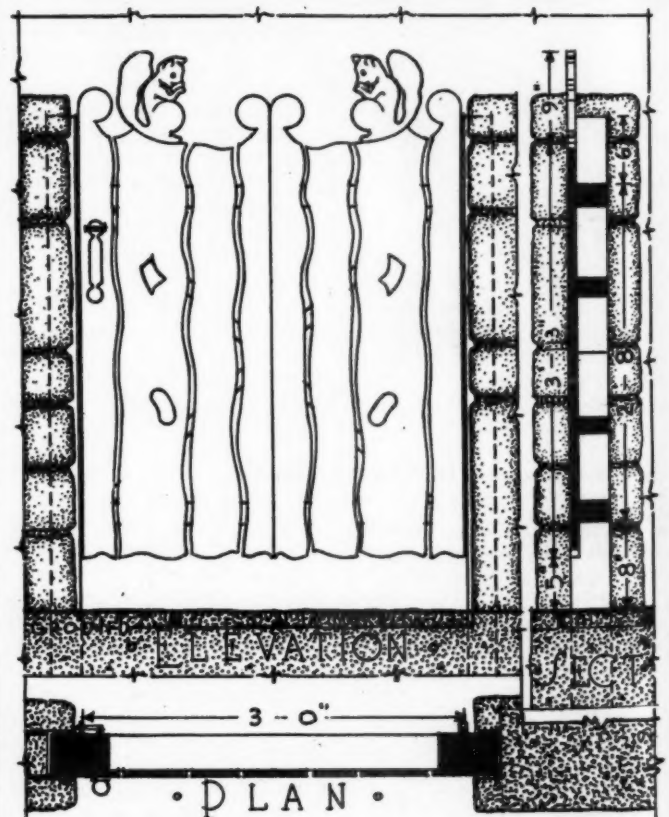
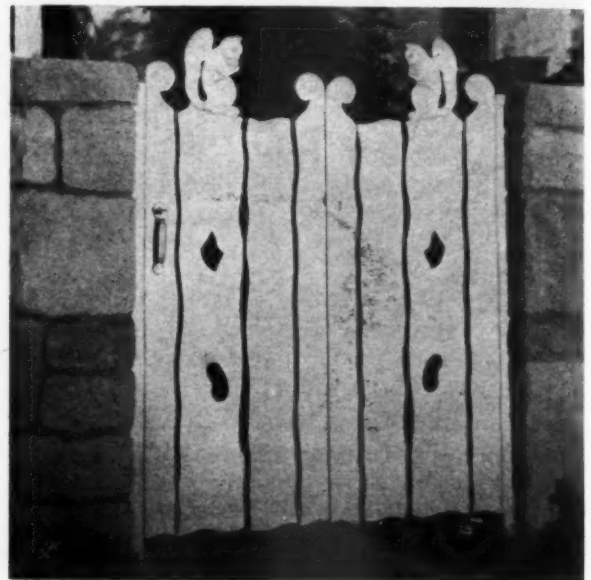


**Extensive Line of
Quality Building Necessities**

How to Build Two Styles of Gates

THE design illustrated below may afford an opening in either a fence or a wall. Its playful spirit is in keeping with informal architectural styles. The animal figures and other decorations may be cut with a scroll saw. Note: If it is possible to secure the vertical posts to the end of the walls, they need be only as high as the gate itself. However, the material list below calls for seven foot posts, assuming that it will be necessary to embed them about three feet into the ground. For each such gate, ask your lumber dealer for the following list of redwood materials:

2 horizontal rails	2" x 3" x 3'-0"	S4S
2 vertical rails	2" x 3" x 3'-0"	S4S
2 cross rails	2" x 3" x 4'-0"	S4S
2 posts	3" x 4" x 7'-0"	S4S
4 boards	1" x 4" x 4'-0"	S4S
2 boards	1" x 8" x 4'-6"	S4S



NOVEL garden gate suggested by California Redwood Association.

2 boards 1" x 6" x 40" S4S

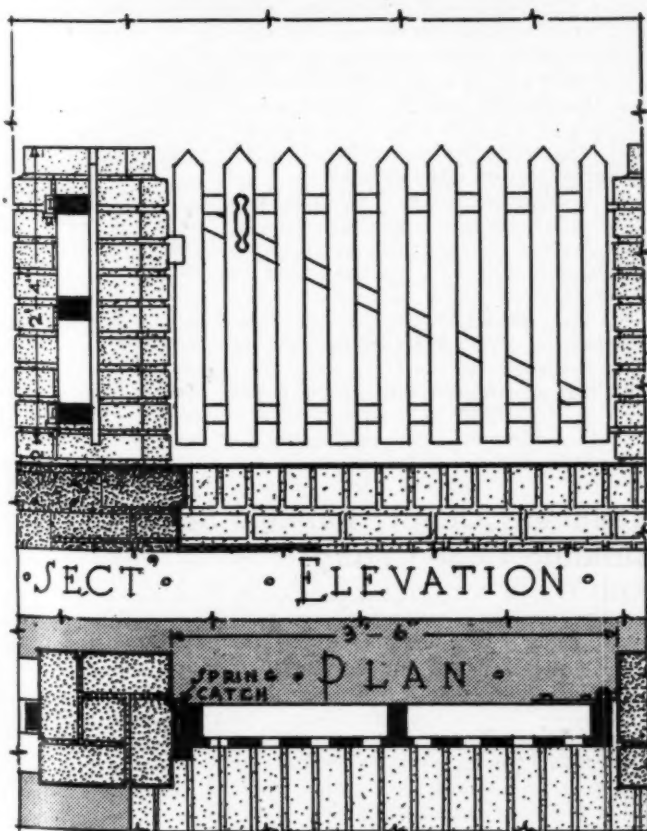
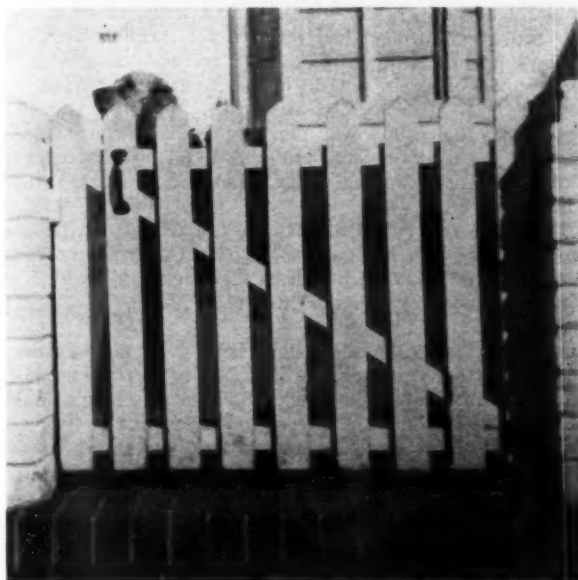
One of the simplest of gates to build is this straight picket gate shown below. The pickets themselves are available in pre-cut Redwood Picket Pack, Colonial style. The first step in its construction is to build a simple rectangular frame with a single cross brace of 2 x 4's. The pickets are placed against this, spaced at approximately their own width slightly more or less to fit the opening. Though illustrated as built between brick piers, it is also suitable for use with picket fences.

Note the small stopping block sunk into the brick at the left. This will not be needed if double-swing hinges are used. The redwood materials needed are:

2 horizontal rails 2" x 3" x 3'-6" S4S
1 cross brace 2" x 3" x 3'-6" S4S
9 pickets 1" x 3" x 2'-6" S4S

Net 2½" wide, 35" long in Picket Pack.

1 block gate stop 2" x 6" x 3" S4S cut
To form stop as indicated.



DETAILS of simple Colonial style entrance gate.

NON-TILTING PLASTER-MORTAR KWIK-MIX 6-P

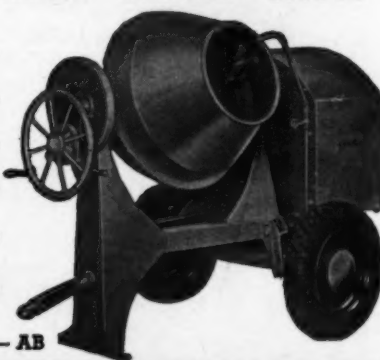


Fast discharge — 7 seconds — no tilting necessary — weighs only 850 pounds — air-cooled engine — V-belt and worm drive.

WRITE FOR BULLETIN NP — AB

3½-S TILTING KWIK-MIX

Side discharge — anti-friction bearings — welded construction — discharge either side — spring mounting.



WRITE FOR BULLETIN SD — AB

KWIK-MIX CONCRETE MIXER CO.
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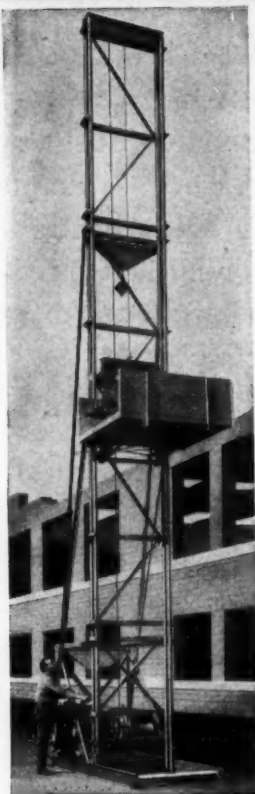
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JAEGER HOISTS, 6 to 100 H.P., are today's leading line — advanced features, low prices. Ask for Catalog H-40.



Self-Raising
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Sections Can
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Up to 67 Ft.

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For the First Time in 40 Years

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SHEET STEEL BUILDING MATERIALS

So completely are our supplies of materials and man-power allocated to defense work that we can accept non-defense orders for only such items of Steel Shingles, Spanish Tile, Ceilings and Sidings as remain in our warehouse stocks. Restrictions will probably prevent their replacement when these are gone.

Until then we shall welcome your orders for immediate delivery only and subject to prior sale.

THE EDWARDS MANUFACTURING CO.
542-562 Eggleston Avenue Cincinnati, Ohio

Home Builders Associations News and Activities

A department intended to keep American Builder readers informed of the important contribution of Home Builders associations to a better organized, more effective industry. Reports of activities, accomplishments and problems of local and national builder groups will be welcome here.—The Editors.

HBI Makes Fast Report on L-41 Order

THE Home Builders Institute, which now maintains a permanent Washington office at 1737 K Street, presided over by Frank W. Cortright, executive secretary, did a fast and effective job in telling its members about the recent construction Conservation Order L-41. Within less than a day after the order was issued every member had received the members' confidential letter outlining the features of the bill and analyzing what home builders could or could not do under it. It was a good job of reporting.

A similarly quick job was done by HBI in connection with H.R. 6927, the Congressional bill introduced by Chairman Steagall of the House Banking and Currency Committee to expand and liberalize Title VI.

HBI officers feel confident that the bill will pass with a minimum of delay. The bill as presented to Congress incorporates fully the recommendations that HBI's Home Builders Emergency Committee, headed by Hugh Potter of Houston, Tex., has been advocating.

Members of this Committee have been doing an effective job and have held several meetings in Washington during the past month. Present members of the Committee in addition to Hugh Potter include: William J. Levitt, Manhasset, Long Island, N.Y., vice chairman; Herbert U. Nelson, Chicago, secretary; Frank W. Cortright, Washington, D. C., executive secretary; Fritz Burns, Los Angeles, Calif.; John McC. Mowbray, Baltimore, Md.; J. C. Nichols, Kansas City, Mo.; George F. Nixon, Skokie, Ill.; Ellis Stoneson, San Francisco, Calif.; and Waverly Taylor, Washington, D. C.

HBI officers have been working steadily in Washington the past eight months with one primary objective in view, according to Cortright. That has been to convince the Administration and Congress that private enterprise if permitted to do so can supply the greater part of urgently needed war housing in defense areas. He reported the following recent gains favorable to the home builder:

1. The granting of priorities to builders themselves instead of to distributors or manufacturers.
2. Acceptance by the War Production Board of a simplified code with respect to plumbing.
3. A more realistic policy of appraisals by FHA on Title VI homes, particularly the recognition of increasing costs in mortgage valuations.
4. The consolidation of housing agencies into a more efficient grouping under the National Housing Administration.
5. Acceptance by the Congress of the principle in the Lanham Bills that government-built housing is to be disposed of after the war.
6. Introduction of Congressional bill to liberalize and extend Title VI of FHA.

Allegheny County Builders Seek Building Code Change

THE HOME BUILDERS Association of Allegheny County, which maintains headquarters in the Plaza Building, Pittsburgh, recently met and adopted a resolution urging the State Department of Labor and Industry to revise its regulations on two-story multi-family buildings. According to William C. Young, chairman of the Association's Building Code Committee, regulations in effect prevent private builders from building low-cost rental housing, while at the same time public agencies are able to proceed because they are not governed by the code.

The following code changes were requested:

1. Rule 403—Permit the use of gypsum lath and cement plas-

ter on ceiling where two apartments are directly above garage.
 Note:—FHA Minimum Construction Requirements permit the use of perforated rock lath and cement plaster in basements, including garages with unit heating plant installed in basement, and to enter basement from front stair hall and omitting the back stairs. Priority restriction limits the installation of heating plants to hot air which requires a considerable amount of piping in the basement, making it impossible to erect interior basement walls.

2. Rule 408—Allow two-story brick veneer dwellings as designed by FHA for Title VI insurance to be erected with wood stairways and wood floors using gypsum lath and cement plaster walls and ceiling.

Note:—FHA Minimum Construction Requirements on recommended plans L-1 and M-1 show stairway of wood partitions and wood studding separating partitions between apartments.

3. Eliminate the compulsory use of metal-clad doors in halls and entrances for the duration of the present emergency. Priorities make it impossible to obtain metal-clad doors.

4. Permit first floor apartments to enter from halls and descend to basement or permit rear wood porches with wood stairs to basement similar to FHA Title VI recommended housing.

5. Permit the use of wood studding to separate apartments in accordance with the Minimum Construction Requirements of FHA approved plans L-1 and M-1, and in accordance with the City of Pittsburgh Building Code which permits this to be done on three-story buildings. However, we are asking this for two-story, multi-family buildings only.

6. If the foregoing recommendations are accepted by the Pennsylvania Department of Labor and Industry, on every two-story, multi-family building erected, it would release for war production 4,650 pounds of steel which would add tremendously to the home building industry's contribution to the war effort.

Grand Rapids Builders Exchange Active

F. E. EDERLE, secretary-manager of The Builders and Traders Exchange, Grand Rapids, Mich., keeps his members in Western Michigan well informed with a weekly letter. This service was especially appreciated on April 15 when all the members received the complete text of Conservation Order L-41, about which they were much disturbed. Officers of the Grand Rapids group are: Martin Osterink, president; Henry Lightner, vice-president; Charles Vandervelde, treasurer; and F. E. Ederle, secretary-manager.

Lady Secretary in St. Louis

ONE OF THE LIVELY up-and-coming local builder groups of the Midwest is the Builders Guild of St. Louis, which has a membership of 162 and which sent a delegation of five to the recent National Home Builders Association meeting in Philadelphia. The St. Louis Guild has for an executive secretary Dolores C. Muller, who is a tireless worker in their interests. President of the Guild is Harold A. Schulenburg, one of the city's prominent builders.

Builders Meet in Philadelphia

(Continued from page 59)

of builders' associations to help them in organizing or to solve local problems that may be holding up their work. Durbin, himself, is one of the most successful home builders in the country. He built and sold 400 houses last year, and is planning to build 1,000 Title VI homes this year.

In the course of the convention discussions it became apparent that the Federal Housing Administration has a wide range of requirements, rules, regulations and red tape as applied to different builders in different cities. Arvid C. Peterson, president of the Builders Association of Detroit, said that the same standards of valuation and cost items should be applied to all cities. He suggested that the Association make up standard cost estimate sheets to include items of overhead, maintenance, selling, etc., that should be included in builders' costs.

Carroll Shelton, executive secretary of the Philadelphia group, reported that in his territory FHA had recently agreed to permit the omission of sheet metal cold air returns, thus saving Phila-

(Continued to page 100)

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With *DEPENDABLE*

Speedmatic SAWS



For those "all-out" war construction jobs, use the power saw that's built to work "all out"—to give dependable, top-speed operation all day, every day. That means SPEEDMATIC. It's an easier handling, faster-cutting, stronger-built saw, designed to stand up under long hours of uninterrupted top-capacity operation!

11% MORE CUTTING POWER—helical gear drive for maximum efficiency. Oversize motor, avoids dangerous overloading and stalling.

ONE-HAND OPERATION—Speedmatic's handle, at natural balancing point, avoids wrist cramping, muscle strain, in any position.

EXTRA-WIDE SHOE—true-balanced, prevents wobbling... relieves saw of strain. Gives steady, accurate, high-speed cutting.

Write today for complete details
PORTER-CABLE MACHINE CO.
 1721-5 N. Salina St., Syracuse, N. Y.
 Representatives in All Principal Cities

ALLITH

War Needs Come First



We're working day and night! Uncle Sam has found out what you've long known: **ALLITH** products have what it takes—even in war time!

We can't promise you "all you want" of your favorite 50-50 **PUSH-OVER** garage door hardware sets—but we'll ship all we can.

And we're already making plans to take care of you dealers handsomely **AFTER** "the duration."

ALLITH-PROUTY, INC.

DANVILLE, ILLINOIS

CHARGE It the Easy SMITH Way!

Select either Feed Chute or Batch-hopper for Faster and Easier Loading.

Handy
FEED CHUTE



5 1/2 cu. ft.
BATCHHOPPER



3 1/2-S SMITH TILTER

—the ONLY small tilter equipped with a feed chute, 31" wide and only WAIST HIGH, it provides a big roomy target for the shovel man.

STEP UP CONCRETE PRODUCTION with a Smith 5 1/2 foot Gated Batch-hopper. Enables you to get one batch ready while the previous one is being mixed and discharged. Speeds up the job materially.

MORE FOR YOUR MONEY — Convenient loading — "End-to-Center" mixing action — faster "Tilt and Pour" discharge. You get them ALL with a Smith 3 1/2-S, yet you pay very little more. Write for literature.

THE T. L. SMITH COMPANY
2849 N. 32nd St. Milwaukee, Wis.

SMITH MIXERS

THE BOULDER DAM MIXERS

WAGNER

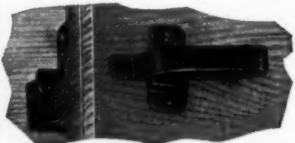
DANDY REVERSIBLE LATCH NO. 847!

FOR SWINGING DOORS POPULAR PRICED

Center screw covered by latch bar at all times.



Convenient padlock eye for security.



Furnished with back latch to protect door from damage, from wind, etc.

Here is a quickly installed, economical and efficient latch for swinging doors. Fits right or left hand doors without changing spring. Long latch bar permits space up to 5/8" between door and jamb.

WAGNER MANUFACTURING COMPANY

Dept. AB-542,

Cedar Falls, Iowa



MEMBERS of Home Builders Association of Allegheny County, Pa., in attendance at Philadelphia HBA meeting. S. E. Kovach, Jr., president; A. P. Rizzo, business manager.



SYRACUSE, N.Y., builders representing the Better Builders Assn. of Onondaga included in their membership the "biggest and smallest" men at the HBA convention: George Barlow, second from left and James L. Flore, center, secretary.

Builders Meet in Philadelphia

(Continued from page 99)

delphia builders \$45 a house, as well as conserving considerable metal.

W. J. Guinan described the preparation of eight new standard house plans and specifications by the Detroit association in cooperation with the local FHA. On these standard plans valuation procedure will be greatly simplified, he pointed out.

Throughout the convention much indignation was expressed at the indecision and irresponsibility that had characterized government officials in connection with the so-called "freeze order." Builders were frank in their expression that the fashion in which this had been handled was outrageous. Ralph S. Duke of the Builders Guild of St. Louis told how his association worked with local unions to protest any unwise and unwarranted curtailment of residential construction.

M. Sanford Abbey of the Rochester Builders Association told how his group had made a complete survey of housing needs in cooperation with FHA. Local builders built the allotment of 500 houses; and, although surveys showed a large housing need, there was difficulty in getting an additional quota.

Builders of Syracuse, according to George T. Johnson, have fought for a change in local building codes and union regulations to permit them to operate under new defense home regulations. A similar problem was reported confronting builders in many other cities.

In several cities it was reported that a few builders had made applications for large numbers of priority orders which had not been used and had not been reassigned to other builders who could use them. On the other hand in some towns it was reported that FHA has quickly recalled the unused quotas of builders who have not been prompt in making use of their priority orders and is reassigning them to other builders.

Such facts as these were constantly brought up—that govern-



NOTABLES at the speakers' table at the banquet concluding the HBA convention include Congressman Leon Sacks and Leo A. Kirk, district director of the Federal Housing Administration.



DELEGATES from the Builders Guild of St. Louis which has 162 members; Dolores C. Muller, center, is executive secretary.

ment regulations of all kinds including those of FHA vary widely in different cities and seem to be somewhat at the disposition of local men in charge. It was pointed out that an important job for any association of builders would be to set up a clearing house of information about such matters so that builders in different cities could help each other to break such bottlenecks.

Universal complaint from builders in many cities was to the effect that FHA forms, priority forms and government regulations were becoming more and more intricate and detailed—for the most part unnecessarily so. It was suggested that with materials closely under control as they now are, it should not be necessary for authorized builders of defense homes to spend so much time in preparing detailed lists of items and filling in forms.

In his closing address, President Durbin pledged his assistance to the builders of the country in meeting the problems of the coming year. He described the value of joining a local builders association. As one illustration, he cited the case of temporary water payments in Detroit. Builders had always paid \$4 for this service, but when they got together in an efficient association, they were able to reduce this charge to \$1. Since that time every builder has saved \$3.00 on every house he has built, which has amounted to many times over the cost of membership in his association.

Newly elected officers and directors of the National Home Builders Association are as follows:

Harry Durbin, Detroit, president.

Stephen E. Kovach, Jr., Pittsburgh, executive vice president.

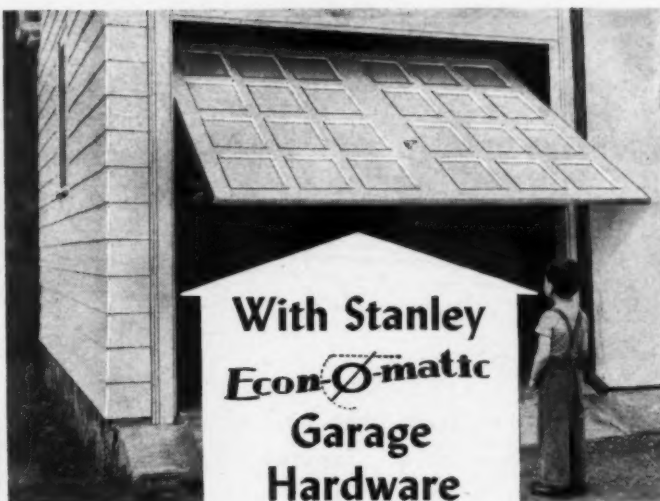
H. A. Schulenberg, St. Louis, treasurer.

Charles Harnett, Washington, recording secretary.

W. J. Guinan, Detroit, executive secretary.

Directors—Charles Harnett, Washington; George C. Barlow, Syracuse; Everett A. R. Searle, Washington; Harry J. Durbin, Detroit; M. Sanford Abbey, Rochester; Russell A. Math, Philadelphia; Fred Garling, Detroit; Alvah B. Lawson, Rochester; H. A. Schulenberg, St. Louis; Ralph S. Duke, St. Louis; George

(Continued to page 102)



the Door "Floats" up Itself!

A turn of the handle and up it goes, *automatically*. A child can operate it, because it lifts itself, takes no effort at all. You'd expect this super-convenience to be expensive, but, instead it is surprisingly low in cost. Fits any old or new stock doors weighing up to 150 pounds.

Put Stanley Econ-O-matic doors on the garages you build. Just the thing to get you a big share of current remodeling business, too. Ask your dealer, or write for details. The Stanley Works, New Britain, Connecticut.

STANLEY

TRADE MARK

HARDWARE FOR CAREFREE DOORS

OWN THE BEST AND SAVE!

MASTER "Interlox" will speed your work, save your money

No. 106-6ft. At your dealer or order direct. Graduated in 1/16s.

\$1.50 EACH

READ INSIDE MEASUREMENT DIRECT—AT TIP OF ARROW

Because every stick is replaceable, your "Interlox" will last far longer—through uncertain days ahead when all tools may be more costly and harder to get. You're bound to save in the long run.

"Interlox" is the rule that slides open and shut like a telescope—three times as fast as "zig-zag" rules. Hold it straight up or straight out—it can't slide shut accidentally. Read both inside and outside measurement direct from rule—no adding, subtracting, remembering.

Now's the time to get the benefits of the extra work-speeding, effort-saving features of this quality rule — and save while you use it.

MASTER
WOOD AND TAPE RULES

Master Rule Mfg. Co., Inc.
Dept. J-5, 815 E. 136th St., N.Y. C.
Enclosed find ☐ check, ☐ money order, ☐ cash for \$1.50 for which send one 6 ft. Master "Interlox" Wood Rule, postpaid.

Name _____
Address _____
City _____
State _____



This new over-roofing method
Is the finest that I've found—
Saves a lot of time and effort
And is stronger all around.
Gives defense against the weather,
Extra insulation too—
And with Robert McNair Shingles
How the profits do accrue!

*** Over-roofing with Robert McNair Red Cedar Shingles requires no "critical" war materials. Here is a market that means extra business during the war emergency.
Members Red Cedar Shingle Bureau—See Advertisement—pages Four and Five.

ROBERT MCNAIR SHINGLE CO.
VANCOUVER, BRITISH COLUMBIA
"OVER 400 DEALERS TO SERVE YOU"

BOOKS ABOUT BUILDING

Authoritative information about the designing, construction and financing of buildings can be found in up-to-date books. We will be glad to recommend suitable books on any subject you are interested in.

BOOK SERVICE DEPARTMENT

AMERICAN BUILDER AND BUILDING AGE
30 Church Street New York, N. Y.

(Continued from page 101)

W. Miller, Detroit; Frank Smith, Philadelphia; A. C. Petersen, Detroit; Cecil K. Rose, Columbus; E. L. Lieberman, Detroit; Thomas McIlvain, Cincinnati; William B. Dixon, Jr., Pittsburgh; James I. Tuckett, Detroit; John Olson, Worcester; W. J. Guinan, Detroit; Stephen Kovach, Pittsburgh; Carl Mayer, Philadelphia.

Among the organizations represented at the meeting were:

Better Builders Association of Onandaga; Builders Guild of St. Louis; Harrisburg Builders Exchange; Home Builders Association of Allegheny County; Home Builders Association of Greater Cincinnati; Home Builders Association of Philadelphia & Suburbs; Home Builders League of South Jersey; The Master Home Builders Association, Inc.; Operative Builders of Washington, D.C.; Residential Home Builders Association of Columbus; The Rochester Home Builders Association; Builders Association of Metropolitan Detroit.

* * *

War Board's Building Order

(Continued from page 40)

binding upon property owners, builders and suppliers, and prohibits not only the start of unauthorized construction but also the "withdrawal from inventory, and the purchase, sale or delivery of any material for use in such construction."

This would appear to make the suppliers, truckers and retailers liable. But to just what extent they must see that the materials they sell do not go into prohibited jobs is not yet clear.

For the typical small builder, lumber dealer and home owner, however, the bulk of the jobs he would normally carry on are not restricted by the order. The section on maintenance and repairs would appear to leave the performing of a considerable amount of work largely up to the discretion of the individual.

To administer Order L-41, a new Housing or Construction Bureau is to be set up in the War Production Board under the direction of William V. Kahler, now on leave of absence as chief engineer of the Chicago area of the Illinois Bell Telephone Company.

Such a consolidation of building sections in WPB will be a most important step and may reduce some of the confusion that has prevailed heretofore. William Kahler is regarded as an able administrator, and as an assistant to William H. Harrison, director of WPB's Production Division, has already had some contact with the problems of the building industry.

The Federal Housing Administration has been wisely selected as the local point of contact for builders. In defense areas applications for priority assistance will continue to be made there, and in all other areas applications



BEAT THE SCHEDULES

On Defense Housing Projects
With "TROUBLE SAVER"
BOLT ATTACHED BRACKETS

Finish your jobs ahead of schedule! Use "Trouble Saver" Bolt Attached Brackets! You'll save time, work and money! You can put them up in a jiffy. You'll protect your workers against accidents! They're made of rail carbon steel. Write for prices and information today!

THE STEEL SCAFFOLDING CO., INC.
402 Missouri St. Evansville, Indiana

EASY TO ATTACH!



Bolt through
2 x 4 across
two studs.
Stands solidly on two legs.

for permission to build and also for priority assistance will be made at the FHA offices.

Careful analysis of building construction for the past six months, and the trend of the past three months, indicates that L-41 actually does not affect greatly the nature of our wartime market. There has been relatively little new residential work in the "non-essential" category undertaken this year, and much less has been planned for later in the year. There has been little or no commercial or industrial building undertaken that does not fall within the defense category. Most farm construction and various types of remodeling work that have been undertaken fall within the price limits set up in this order.

The volume of "essential" war construction in the residential and industrial classifications deemed necessary as a part of the 1942 war construction program is tremendous. Thirteen billion dollars is the War Production Board's estimate. Priority assistance for 350,000 new housing units has already been arranged for by WPB, and it may be reasonably assumed that this quota will be exhausted by mid-summer and a new quota set up.

All types of war construction, whether directly by the Government or privately financed, is being handled by the established building industry. The specifications and use of materials continue as usual as functions of established, experienced building professionals. Tens of thousands of building contractors are now, and will continue to be, actively engaged in selecting and using materials necessary for the huge 1942 program. They are basing material and equipment selection on the knowledge they already have of such products or are securing by means of continued intelligent advertising and promotion by manufacturers.

* * *

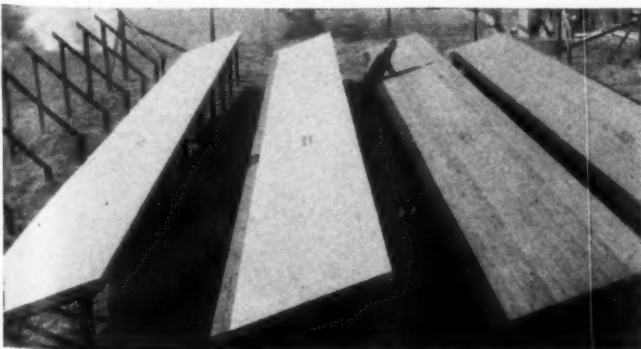
Maze Nail Farm Tests Nails

FOR MANY YEARS, W. H. Maze Company, Peru, Ill., has operated what it calls a "Nail Farm." Purpose of the farm—illustrated here—is to test the rust resistance of various Maze nails under actual conditions. The farm consists of a series of actual roofs laid with samples of the fifteen different Maze nails. Accurate records are kept of the nails after various stages of exposure.

To increase the resistance of nails to rust, the Maze Company employs a process registered under the trade name of "Zinclad." The process is distinguished from galvanizing in that, whereas galvanized nails are "tumbled" in a zinc solution, Zinclad nails are dipped, completely submerged in a bath of pure zinc.

Two factors control the degree to which a zinc coated nail will resist rust. The first is the thickness of the zinc coating. The second is the evenness and purity of the zinc coating. The latter requirement is important, for rust can enter through one weak spot in an otherwise perfect zinc coating.

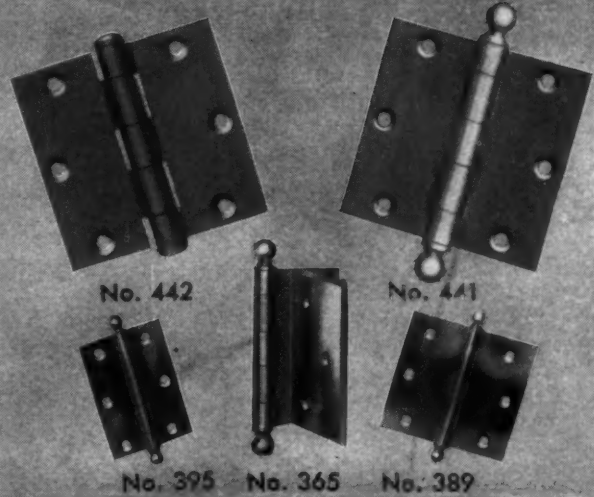
The Maze Company manufactures nails for metal roofing, asphalt, cedar and asbestos shingles, nails for cribbing, nails for moulding and lattice work and nails for general construction work. Solid copper nails, lead-head nails and Zinclad nails provide the backbone of the line. The company also manufactures glazing points.



MAZE "Zinclad" nails are tested here.

FRANTZ

Guaranteed BUILDWARE



For 30 years Frantz has supplied the needs of the nation for quality hardware. Now Frantz offers approved items for defense housing. See your dealer or write.

FRANTZ MANUFACTURING CO.
Sterling, Illinois



YOU CAN APPLY
More Squares
PER MAN-HOUR



WITH
MULE-HIDE
COR-DU-ROY



● Shingle ends are notched for instant spacing.
● The Cor-Du-Roy is a perfect straight-edge for speedy alignment—no "squinting" down plumb lines.
● Less nails to buy & to apply*
● Non-slip cellulose fibre back permits more shingles in front of workmen—less "fussing" around on roof.

*** THICK BUTTS**

WRITE for SAMPLES

THE LEHON COMPANY

4425 SOUTH OAKLEY AVENUE
CHICAGO • • • ILLINOIS

ASPHALT SHINGLES • ROLL ROOFING • WATERPROOFING SPECIALTIES • ROOF COATING • BUILT UP ROOFS

For ASBESTOS SHINGLE SIDING


**CALBAR
CAULKING
COMPOUND**

It is necessary to seal Nail Holes, Corners and Openings around Windows and Doors in order to provide a really Waterproof Job—Use Calbar Caulking Compound.

Asbestos Shingle Siding usually requires a Brilliant White color or Brilliant Light Gray, other colors can also be furnished. Made in several Grades, easily applied with Calbar Pressure Gun.

Send for information or order thru your Jobber.

CALBAR PAINT & VARNISH CO.

Manufacturers of Technical Products

2612-26 N. MARTHA ST.

PHILADELPHIA, PA.

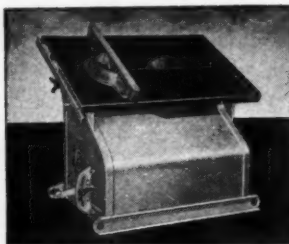


**MIXERS
BATCHERS
PUMPS
SAW RIGS
HOISTS
CARTS
BARROWS**


KOST KUTTER SAWS!
Streamlined ... Fast Cutting ... Sturdy!

Contractor says:

"There's no vibration. The engine floats on rubber and springs. I like its portability, too." Get information on CMC's 3 popular size power saws ... Kost Kutter, Kost Kutter Jr. and Heavy Duty Power Sawyer.


CONSTRUCTION MACHINERY CO.

Waterloo, Iowa



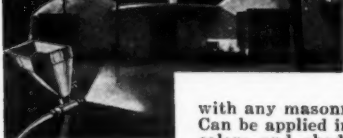
**On Remodeling Jobs
Wise Builders
USE
PAINE TOGGLE BOLTS TO FASTEN WORK**

To Lath and Plaster, Machalite, Sheet Rock, Gypsum, Hollow Tile, Composition Boards Walls and Ceilings

●Go in Faster. ●Won't Pull Out. ●Wing edges engage Bolt Thread when tightened—preventing bolt from working loose.
●A definite saving over hand-made wood plugs.

Ask Your Hardware Dealer and Write for Catalog.

THE PAINE CO. 2959 CARROLL AVENUE
CHICAGO, ILLINOIS
NEW YORK WAREHOUSE & SALES—48 WARREN STREET

**BIG OPPORTUNITY
Stucco Spraying**


Present day construction needs better and faster finishing methods. Plastic COLORCRETE is waterproofed. It can be used on new or old buildings. It fuses with any masonry surface. Fills cracks and checks. Can be applied in any thickness and in 30 beautiful colors and shades.

Fully proven by over 14 years actual use under all climatic conditions. Offers big earnings. With this machine you can supply the big waiting market at amazingly low cost. Present operators report costs of 2c and up per sq. ft. and sell up to 7c. Some have paid for their equipment from first few jobs. Machine capacity up to 1,000 sq. ft. per hour.

Get the facts. Send for free book "Proven Business Opportunity." Write today.

COLORCRETE INDUSTRIES, INC.

500 Ottawa Ave.,

Holland, Mich.

Laminated Lumber Speeds Expansion

(Continued from page 53)

buildings consumed a similarly impressive quantity of special materials. Here are some astronomical numbers to warm the hearts of lumber men who might have feared the coming of the day when steel would completely replace their various specialty products:

3,900,000 ft. 1/4" plywood wallboard.

2,958,000 ft. 1x4 clear yellow pine flooring.

1,500,000 ft. 12" No. 1 fir S4S sills and girders.

10,336,000 ft. 2x10 16' fir floor joists.

6,900,000 ft. 1x6 No. 1 YP S4S wall and floor sheathing.

2,400,000 ft. 1x6 No. 2 YP D & M roof sheathing.

Traditionally the United States Navy does things in a big way. The building of their greatly expanded Training Station at Great Lakes is no exception. They've just about finished building the buildings needed for the building of the men who will build the kind of world in which we want to live. Japanese papers please copy.

—JOHN S. SAMELSON,
Chief Yeoman, USNR.

* * *

Philadelphia Row Houses

(Continued from page 51)

mass production methods. The houses have 10" solid concrete basement walls and solid masonry construction above that. In building the basement walls Orleans uses plywood form panels which are oiled and reused.

The usual practice followed by Philadelphia builders in construction row houses is to elevate the front section and provide a little stretch of lawn together with substantial concrete front steps. At the rear, the alleyways between the row house buildings are excavated somewhat and paved. Each individual house thus has its own garage entrance from the alley. Alongside the garage entrance is a separate back door entrance to the apartment with inside steps leading to the kitchen.

Heating plants of the Orleans Valley Park job are Bryant gravity type, either gas or oil fired. As previous-



REAR VIEW of Orleans Philadelphia row house project showing garage and back door entrances and chimney detail. Area between rows is paved and each house has individual garage.

ly explained, there are no metal cold air returns, the vents being merely cut into the floors. An unobstructed space is left across the front end of the basement which may be used as a recreation room.

Orleans' FHA financing plan, when the houses are sold outright rather than on a rental-purchase plan, is as follows:

20-YEAR FHA FINANCING PLAN

Cash, \$465.00

Monthly Payments:

Savings and Interest.....	\$24.05
Taxes and Water Rent (estimated).....	8.25
Fire Insurance.....	.37
FHA Mortgage Premium.....	1.65

Total Monthly.....\$34.32

Average Monthly Saving.....15.80

Net Monthly Cost.....\$18.52

Timber-Built Highway Bridge Conserves Steel

TIMBER construction of highway bridges, besides releasing urgently needed metals for war purposes, will produce sturdy structures speedily and at low cost. An especially fine demonstration of this may be seen in the new Crabbe Road Bridge across the North River near Tuscaloosa, Alabama, recently opened to traffic by the county board of revenue.

The bridge, 333½ feet long with a 24-foot roadway, designed for an H-15 loading, cost \$43,000 including the concrete piers—or \$5.36 per square foot of roadway.

Designed by Donald A. du Plantier, associate professor of structural engineering, College of Engineering, University of Alabama, for fabrication by the Teco system of engineered timber construction, it was fabricated and erected by WPA labor under the direction of Powell Baker, WPA engineer.

The approaches are supported by trestles of 15-foot span, six on the south side and four on the north, with 12" x 12" trestle caps. The channel span is composed of two identical pairs of 90-foot span, half-through trusses, 15 feet deep. End posts are 6" x 14"; chords, 6" x 12"; diagonals, 6" x 8", and verticals, 8" x 10" with the ten-inch dimension placed transverse to the bridge axis to stiffen the top chord for half-through construction. Joints are connected by Teco four-inch shear plates and split rings, flat spiked grids and single curved spiked grids. Each main truss joint has four ¾" steel gusset plates, two outer and two inner.

Floor trusses have 8" x 12" chords, 6" x 8" verticals, and 2" x 12" diagonals in pairs. Lateral bracing is of the "K" type with 3" x 8" timbers and steel gussets welded to the main gussets.

Stringers are 6" x 16", 15-foot span, placed 30 inches on centers. Toenailed to the 4" x 10" subflooring is 2" x 2" laminated gum, surface flooring.

All timber was creosoted. In the piling, a 16-pound full-cell treatment was employed and, for the other wood, an eight-pound open cell treatment.

In designing the bridge, Prof. du Plantier took advantage of the technical data and typical Teco designs offered to engineers by the Timber Engineering Company, Washington, D. C. He also had available the advisory services of the regional distributors of Teco Timber Connectors, Maxwell & Hitchcock, Atlanta, licensee of the Timber Engineering Company of Georgia and Alabama.

Favors Building Industry Training

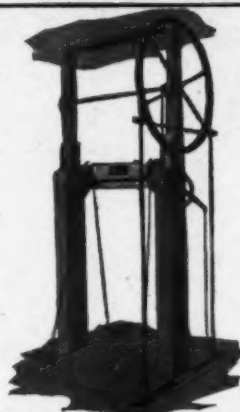
Lafayette, Ind.

To the Editor:

You are certainly to be congratulated for your splendid article in the February issue of *American Builder* by Arthur Hood of the Johns-Manville Company. More articles of this character are certainly needed.

CARL F. BOESTER,

Director of Housing Research, Purdue University.



KIMBALL HAND POWER ELEVATORS

A complete line of efficient Hand Power and Electric Elevators built to suit any requirement.

Fitted for rapid installation in your building. These straight-line-drive machines are little giants of lifting power and are surprisingly nominal in costs.

FREE Engineering Data

Give us your problems and let our engineers help you. Full descriptive literature on request.

KIMBALL BROS. CO.

915-989 Ninth Street Council Bluffs, Iowa

SAWS RAFTERS WITHOUT MARKING!



Here's the most practical contractor's saw on the market today—the Wallace No. 1 Radial Saw. With the exclusive Wallace Angulator, it cuts rafters complete with only ONE handling and without marking.

It's a real money-maker on framing work, saving \$75 to \$200 on average homes. Handles every kind of sawing operation, and also does first-class shaping, daddling, ploughing, grooving, fluting, bevelling, routing, etc.

Don't delay—write today for bulletins on the Wallace No. 1 Radial Saw.

J. D. WALLACE & CO.

136 So. California Ave., Chicago, Ill.

SECTIONAL, GALVANIZED STEEL DOORS

MORE DURABLE!

Owners of homes and commercial buildings alike voice keen approval of Kinnear Rol-TOP Doors. These all-steel galvanized upward-acting doors cannot sag, warp, split, or pull apart. They are weatherproof; they repel fire; they protect against intrusion. Kinnear steel Rol-TOP Doors are made to fit openings of any size. Furnished for manual, mechanical or motor operation (the latter may have remote control) and with windows provided for in any number of sections. The smooth, easy, counterbalanced action appeals to home owners; ease of installation appeals to builders. Write today for details on Kinnear Rol-TOP Doors; there is no obligation.



KINNEAR
ROL-TOP

The KINNEAR MFG. CO. 1560-80 Fields Ave. COLUMBUS, OHIO

PROMPT DELIVERY ON UNIVERSAL LEVEL TRANSIT

Patent
Ball Bearing
Center



Ideal for Defense Plant and Large Construction Jobs

PROMPT DELIVERY WITH Preference Rating

Powerful 12" Telescope—Price complete with Tripod, Carrying Case, Sunshade, and Dust Cap \$115.00, plus \$4.00 Excise Tax. Can be furnished with a compass at \$12.50 Extra.

Write for free booklet—HOW TO LAY OUT BUILDING LOTS

Expert Repairing of all makes of instruments

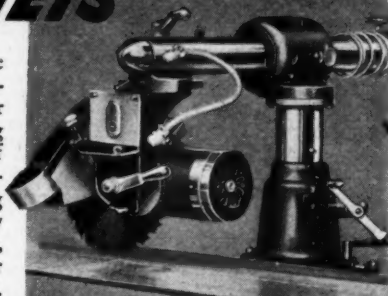
DAVID WHITE CO. 311 W. Court St., Milwaukee, Wis.

Time is Priceless!

USE COMETS

Long before the defense emergency Comet Senior Radial Power Saws proved their worth. Today they are doing yeoman service on scores of defense jobs. TIME is priceless... and Comets are saving TIME wherever in use. They offer greater speed, power, accuracy. Order from your dealer or write Consolidated.

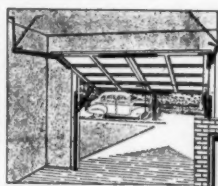
CONSOLIDATED MACHINERY & SUPPLY COMPANY, LTD.
LOS ANGELES, CALIFORNIA



The Comet SENIOR

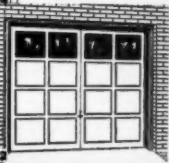
FLOATING ACTION QUALITYBILT "UNI-ROL" GARAGE DOOR

Complete with Stanley "Swing-up" Hardware, Cylinder Lock, Metal Weather-strip.



Two stock sizes...two designs. Doors are 1 1/2" thick...prefitted for 8-0x7-0 and 8-0 x 6-6 openings. Only 1 1/4" headroom and 2 1/2" sideroom needed. If your dealer cannot supply you, write. Dpt. AMS42

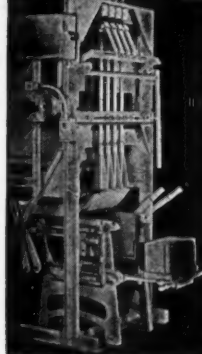
Here's the top value in a complete garage door. It combines all features to create bigger sales and profits. Easily installed.



★
LOW COST
★
HIGH QUALITY
★
TOXIC TREATED

FARLEY & LOETSCHER MFG. CO., Dubuque, Ia.

LOW COST MACHINE BLOCK-BRICK-TILE



SUCCESS equipment assures profitable products plants.

BECAUSE—they are efficient, self-contained, offering lowest production cost with lowest maintenance.

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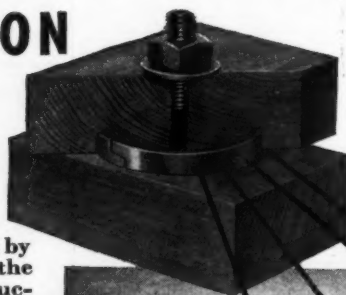
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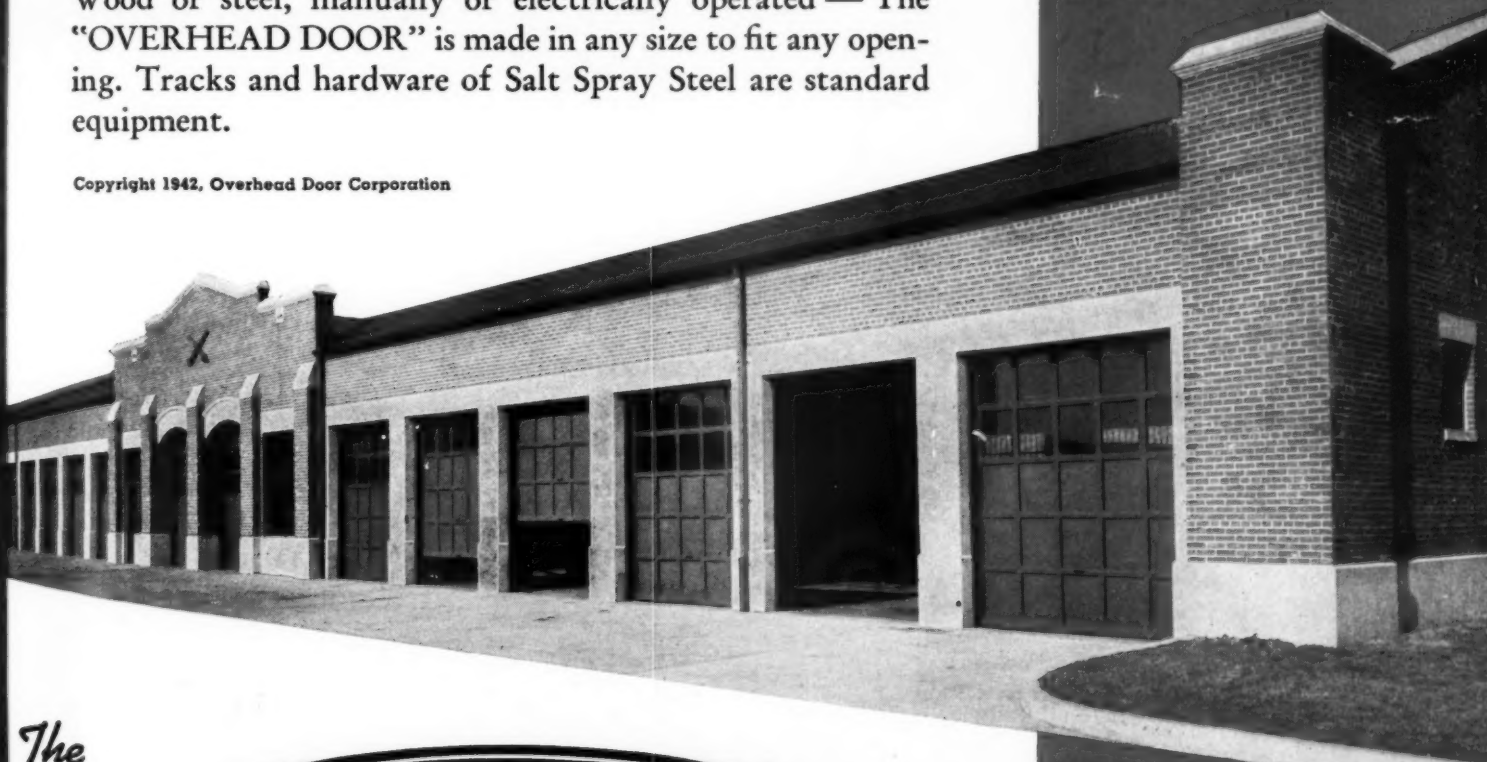
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